SOVIET PHYSICS JETP

Volumes 37-38 **July 1973-June 1974** Index

a translation of ЖУРНАЛ ЭКСПЕРИМЕНТАЛЬНОЙ И ТЕОРЕТИЧЕСКОЙ ФИЗИКИ
Zhurnal Eksperimental'noi i Teoreticheskoi Fiziki
(Journal of Experimental and Theoretical Physics) Vols. 64-65, January-December 1973
published by the American Institute of Physics

SOVIET PHYSICS JETP

GOVERNING BOARD

H. Richard Crane, *Chairman*
H. William Koch, *ex officio*
Robert T. Beyer
J. V. Bouyoucos
Joseph A. Burton
James L. Flanagan
Kenneth W. Ford
William A. Fowler
Laurence W. Fredrick
James B. Gerhart
J. E. Goldman
Martin Greenspan
Janet B. Guernsey
W. W. Havens, Jr.
Sherwood K. Haynes
Gerald Holton
G. A. Jeffrey
E. Leonard Jossem
Robert P. Kraft
J. A. Krumhansl
John S. Laughlin
A. I. Mahan
Sidney Millman
Philip M. Morse
E. R. Piore
Jarus W. Quinn
R. S. Rivlin
Arthur H. Rosenfeld
Arthur L. Schawlow
Frederick Seitz
F. Dow Smith
A. A. Strassenburg

GENERAL ADMINISTRATION

H. William Koch, *Director*
Sidney Millman, *Secretary*
Gerald F. Gilbert, *Treasurer*
Lewis Slack
Associate Director, General Activities
Robert H. Marks
Associate Director, Publishing

DIRECTORS OF PROFESSIONAL DIVISIONS

A. W. K. Metzner, *Publications*
Theodore Metaxas
Brookhaven Publishing Operation
Harold L. Davis, *Physics Today*
Spencer R. Weart, *Physics History*
Audrey Likely, *Public Relations*
Dion W. J. Shea, *Education*
Raymond W. Sears, *Manpower*

PUBLISHING SERVICES

Edward P. Greeley, *Advertising*
Mitchell Koch
Managing Editor
Leon Benedict, *Composition*
Gerald Goodman, *Indexing*
Jo-Ann Wasserman
Sr. Editorial Supervisor
Robert Will
Sr. Journal Supervisor
John Di Caro, *Fulfillment*

10/74

American Institute of Physics Translations Advisory Board:

Robert T. Beyer, *Chairman*
J. George Adashko — Francois Kertesz
Freeman J. Dyson — Robert H. Marks, *Secretary*
Morton Hamermesh — A.W.K. Metzner
David Harker — Clark S. Robinson

Editor of *Soviet Physics–JETP:*
J. George Adashko, 25 West 81st Street, New York, New York 10024

Soviet Physics-JETP, a translation of ЖУРНАЛ ЭКСПЕРИМЕНТАЛЬНОЙ И ТЕОРЕТИЧЕСКОЙ ФИЗИКИ, *Zhurnal Eksperimental' noi i Teoreticheskoi Fiziki*, is a monthly journal published by the American Institute of Physics and contains a complete translation of the *Journal of Experimental and Theoretical Physics* of the Academy of Sciences of the USSR (editorial address: Vorob'evskoe Shosse 2, Moscow V-334, USSR). Volume 1 of *Soviet Physics-JETP* corresponds to Russian Vol. 28 (1955). Two volumes are published annually, each of six issues and a new volume begins in July and January. Each volume contains the translation of one volume of the *Journal of Experimental and Theoretical Physics*.

The American Institute of Physics and its translators propose to translate faithfully all the material appearing in the original articles. The views expressed in the translations are therefore those of the original authors, and not of the translators nor of the American Institute of Physics.

The transliteration of the names of Russian authors follows essentially the standard agreed upon by the British Standards Institute and the American National Standards Institute (Committee Z39).

Subscriptions, renewals, address changes, and single-copy orders should be addressed to: Subscription Fulfillment Division, American Institute of Physics, 335 East 45th Street, New York, N.Y. 10017. Allow at least six weeks advance notice. For address changes please send both old and new addresses, and, if possible, include an address-stencil imprint from the mailing wrapper of a recent issue. For your convenience a change of address form is included in every issue of *Physics Today;* please use it.

Subscription prices (for Vols. 39–40, July 1974–June 1975):

U.S.A., Canada, Mexico	Europe, Middle East, North Africa (mandatory air freight)	Foreign (surface mail)	Optional air freight (Asia)	Single copies
$180.00	$189.00	$184.00	$200.00	$17.00

Complete volumes of *Soviet Physics–JETP* are available on microfilm (16 mm or 35 mm on reels or cartridges): Vols. 1–35 (July 1955–December 1972) $1410; Vols. 36–37 (January–December 1973) $120.

Soviet Physics-JETP also appears on a monthly basis in *Current Physics Microform* (CPM) Section II ($2000 per year) along with 15 other translation journals published by the American Institute of Physics and its member societies. *Soviet Physics–JETP* is indexed quarterly in *Current Physics Index*, a subject and author index (with abstracts) to all journals published by AIP or its member societies.

Copyright: All the material published in this journal is Copyright © 1975 by the American Institute of Physics, and all rights are reserved. Address inquiries to Director, Publications Division, American Institute of Physics, 335 East 45 Street, New York, N.Y. 10017.

Second-class postage paid at New York, N.Y. and additional mailing offices

Analytic subject index to volumes 37–38:

1263 1 Communication, education, history, and philosophy
1263 3 Classical and quantum mechanics
1263 4 Relativity and gravitation
1263 5 Statistical physics and thermodynamics
1264 7 Specific instrumentation of general use in physics
1264 11 General field and particle theory
1264 12 Specific theories and interaction models; particle systematics
1264 13 Specific reactions and phenomenology
1264 14 Properties of specific particles and resonances
1264 23 Nuclear decay and radioactivity
1264 24 Nuclear reactions and scattering, general
1264 25 Nuclear reactions and scattering, specific reactions
1264 28 Nuclear engineering and nuclear power studies
1264 29 Experimental methods and instrumentation for elementary particle and nuclear physics
1265 31 Atoms
1265 32 Molecules
1266 34 Collision processes and interactions of molecules, atoms, or ions
1266 35 Macromolecules and polymers
1266 41 Physics of gases
1266 42 Fluid dynamics
1267 43 Plasma physics
1269 51 Structure of liquids and solids; crystallography
1269 52 Mechanical and acoustic properties of condensed matter
1270 54 Equations of state, phase equilibria, and phase transitions
1271 55 Thermal properties of condensed matter
1271 56 Transport properties of condensed matter (nonelectronic)
1271 57 Liquid and solid helium; quantum fluids
1272 58 Surfaces and interfaces; thin films and whiskers
1272 61 Electron states
1273 62 Electronic transport in condensed matter
1275 63 Electronic structure and electrical properties of surfaces, interfaces, and thin films
1275 64 Super conductivity
1276 65 Magnetic properties and materials
1278 66 Magnetic resonance and relaxation in condensed matter; Mossbauer effect
1280 67 Dielectric properties and materials
1280 68 Optical properties and condensed-matter spectroscopy
1281 69 Electron and ion emission by liquids and solids; impact phenomena
1281 71 Optics
1282 72 Acoustics
1282 74 Physical chemistry
1283 75 Materials science and metallurgy
1283 76 Electromagnetic technology
1283 77 Electrical and magnetic devices
1283 84 Galactic and extragalactic astronomy
1283 86 Solar system

1284 **Author index to volumes 37–38**

This index is based on the 1974 *Physics and Astronomy Classification Scheme* developed by AIP. It is not a translation. It was produced by computer-aided photocomposition directly from the magnetic tapes of the AIP's Current Physics Information System. Suggestions for improvements as well as other comments are welcome and should be addressed to the Editor.

A new feature introduced in this index is the inclusion of microfilm reel and frame numbers for the convenience of those wishing to find articles in *Current Physics Microform* (CPM), the monthly microfilm edition of the complete set of journals of the American Institute of Physics. These numbers are given in the form **CPM-7201A0321**, where 72 refers to the year, 01 denotes the month (January in this example), A the cartridge (generally there are four cartridges every month: A,B,C,D), and 0321 the frame.

SUBJECT INDEX TO VOLUMES 37-38

Papers are arranged in ascending page number order.

1. COMMUNICATION, EDUCATION, HISTORY, AND PHILOSOPHY

From the history of the Journal of the Russian Physicochemical Society/JETP (In observance of the centennial of the Russian Physical Journal) —Yu. M. Tsipenyuk. **37**(1), 1–24 (Jul. 1973); CPM-7401D0703

3. CLASSICAL AND QUANTUM MECHANICS

Stable motion and acceleration of a charged particle in a linearly polarized electromagnetic wave in a gaseous medium —G. A. Nagorskiĭ and Yu. F. Orlov. **37**(3), 387–9 (Sep. 1973); CPM-7406X1395

On the theory of open resonators —S. Yu. Slavyanov. **37**(3), 399–403 (Sep. 1973); CPM-7406X1407

Group Velocity and the macrocausality conditions for the "forward" scattering amplitude —V. L. Lyuboshitz. **38**(4), 655–60 (Apr. 1974); CPM-7502X0015

Asymptotic expansion of the partition function for a rigid asymmetric top —M. I. Kaplan. **38**(6), 1260–1 (Jun. 1974)

Quantum theory of nonlinear oscillators interacting with the medium —M. I. Dykman and M. A. Krivoglaz. **37**(3), 506–11 (Sep. 1973); CPM-7406X1514

Scattering of an electron in an electromagnetic wave and in a homogeneous magnetic field —D. I. Abakarov and V. P. Oleinik. **37**(5), 784–6 (Nov. 1973); CPM-7410X0124

Interaction between solitons in a stable medium —V. E. Zakharov and A. B. Shabat. **37**(5), 823–8 (Nov. 1973); CPM-7410X0163

Localization of electrons in a magnetic field —B. I. Shklovskiĭ and A. L. Éfros. **37**(6), 1122–7 (Dec. 1973); CPM-7412X0170

Bresmstrahlung effect in a strong radiation field —P. V. Elyutin. **38**(6), 1097–9 (Jun. 1974)

4. RELATIVITY AND GRAVITATION

4.20.– General relativity

Gravitational collapse with a physical singularity on an isotropic hypersurface —V. K. Pinus and A. L. Frenkel'. **37**(1), 25–7 (Jul. 1973); CPM-7401D0727

Anisotropic solution of the gravitation equations with an isotropic singular hypersurface —V. K. Pinus. **37**(4), 564–7 (Oct. 1973); CPM-7407X1306

Field theory of gravitational field sources —Yu. B. Rumer and B. G. Konopel'chenko. **37**(4), 568–71 (Oct. 1973); CPM-7407X1310

Singularities of the cosmological model of the Bianchi IX type according to the qualitative theory of differential equations —O. I. Bogoyavlenskiĭ and S. P. Novikov. **37**(5), 747–55 (Nov. 1973); CPM-7410X0087

Amplification of electromagnetic and gravitational waves scattered by a rotating "black hole" —A. A. Starobinskiĭ and S. M. Churilov. **38**(1), 1–5 (Jan. 1974); CPM-7405F0001

Macroscopic bodies with zero rest mass —A. F. Andreev. **38**(4), 648–51 (Apr. 1974); CPM-7502X0008

4.30.+ Gravitational waves and radiation

Amplification of waves during reflection from a rotating "black hole" —A. A. Starobinskiĭ. **37**(1), 28–32 (Jul. 1973); CPM-7401D0730

Gravitational Compton effect and photoproduction of gravitons by electrons —N. A. Voronov. **37**(6), 953–8 (Dec. 1973); CPM-7412X0001

On the phenomenology of gravitation —N. M. Polievktov-Nikoladze. **37**(6), 959–67 (Dec. 1973); CPM-7412X0007

Anisotropic turbulent distributions for waves with a nondecay dispersion law —A. V. Kats and V. M. Kontorovich. **38**(1), 102–7 (Jan. 1974); CPM-7405F0102

Emission of gravitational waves by an electromagnetic cavity —L. P. Grishchuk and M. V. Sazhin. **38**(2), 215–21 (Feb. 1974); CPM-7405F0433

Study of gravitational waves emitted by a rapidly rotating drop of a homogeneous gravitating liquid —M. N. Fedosov and V. P. Tsvetkov. **38**(4), 641–2 (Apr. 1974); CPM-7502X0001

Electromagnetic detectors of gravitational waves —V. B. Braginskiĭ, L. P. Grishchuk, A. G. Doroshkevich, Ya. B. Zel'dovich, I. D. Novikov, and M. V. Sazhin. **38**(5), 865–9 (May 1974)

4.40.+ Continuous media; electromagnetic and other mixed gravitational systems

Amplification of electromagnetic and gravitational waves scattered by a rotating "black hole" —A. A. Starobinskiĭ and S. M. Churilov. **38**(1), 1–5 (Jan. 1974); CPM-7405F0001

Deviation of an expanding universe that is isotropic in the mean from the Friedmann universe —A. V. Byalko. **38**(3), 421–6 (Mar. 1974); CPM-7411X0801

Electromagnetic and gravitational waves in a stationary magnetic field —Ya. B. Zel'dovich. **38**(4), 652–4 (Apr. 1974); CPM-7502X0012

The radiations emitted by an ultrarelativistic particle in a gravitational field —I. B. Khriplovich and E. V. Shuryak. **38**(6), 1067–8 (Jun. 1974)

4.60.+ Quantum theory of gravitation

On the regularizing role of a gravitational field —M. A. Markov. **37**(4), 561–3 (Oct. 1973); CPM-7407X1303

5. STATISTICAL PHYSICS AND THERMODYNAMICS

5.30.– Quantum statistical mechanics

Two-component charged Fermi liquid in a magnetic field —S. Z. Dunin and E. P. Fetisov. **37**(1), 142–6 (Jul. 1973); CPM-7401D0844

High density bose gas with strong attraction between the particles — V. S. Babichenko. **37**(2), 311–6 (Aug. 1973); CPM-7404E0565

Size effects in the magnetic susceptibility of metals —S. S. Nedorezov. **37**(2), 317–21 (Aug. 1973); CPM-7404E0571

Interaction between solitons in a stable medium —V. E. Zakharov and A. B. Shabat. **37**(5), 823–8 (Nov. 1973); CPM-7410X0163

Distribution of hot phonons generated by laser radiation —I. B. Levinson. **38**(1), 162–6 (Jan. 1974); CPM-7405F0162

Correlation functions for a one-dimensional Fermi system with long-range interaction (Tomonaga model) —I. E. Dzyaloshinskiĭ and A. I. Larkin. **38**(1), 202–8 (Jan. 1974); CPM-7405F0202

Statistical properties of the energy spectrum of "glancing" electrons with mixed classical trajectories —G. M. Zaslavskii and N. N. Filonenko. **38**(2), 317–23 (Feb. 1974); CPM-7405F0535

Giant quantum oscillations of Rayleigh sound wave absorption in metals —A. M. Grishin and É. A. Kaner. **38**(2), 365–72 (Feb. 1974); CPM-7405F0583

5.40.+ Fluctuation phenomena, random processes, and Brownian motion

Quantum theory of nonlinear oscillators interacting with the medium —M. I. Dykman and M. A. Krivoglaz. **37**(3), 506–11 (Sep. 1973); CPM-7406X1514

On stochastization of one-dimensional chains of nonlinear oscillators —V. E. Zakharov. **38**(1), 108–10 (Jan. 1974); CPM-7405F0108

On the kinetics of magnetization of suspensions of ferromagnetic particles —M. A. Martsenyuk, Yu. L. Raikher, and M. I. Shliomis. 38(2), 413–6 (Feb. 1974); CPM-7405F0631
"Kirchhoff" form of fluctuation–dissipation theorem for distributed systems —M. L. Levin and S. M. Rytov. 38(4), 688–92 (Apr. 1974); CPM-7502X0048
Random walks of a particle on lattices with traps —B. Ya. Balagurov and V. G. Vaks. 38(5), 968–71 (May 1974)

5.70.– Thermodynamics

Critical phenomena in a liquid in a strong electric field —V. L. Pokrovskiĭ and S. V. Fomichev. 37(4), 731[12] (Oct. 1973); CPM-7407X1473
Critical fluctuations in external fields —B. L. Lakoza, V. M. Sysoev, and A. V. Chalyĭ. 38(2), 298–303 (Feb. 1974); CPM-7405F0516
Multipoint energy density correlators for the two-dimensional Ising model —E. A. Shapoval. 38(2), 378–82 (Feb. 1974); CPM-7405F0596
Scaling relation for phase transitions in a one-dimensional x-y model —V. I. Ponomarev, V. M. Kontorovich, and V. M. Tsukernik. 38 (3), 600–3 (Mar. 1974); CPM-7411X0980

5.90.+ Other topics in statistical physics and thermodynamics

Discontinuity of vibrational and translational temperatures in a system with fast-particle sources —A. I. Osipov, A. N. Khmelevskiĭ, and R. V. Khokhlov. 38(2), 264–6 (Feb. 1974); CPM-7405F0482
Diffusion of magnetization in a Heisenberg ferromagnet above the Curie point —S. V. Maleev. 38(3), 613–9 (Mar. 1974); CPM-7411X0993
Kinetics of a quantum particle in a one-dimensional random potential —V. L. Berezinskiĭ. 38(3), 620–7 (Mar. 1974); CPM-7411X1000

7. SPECIFIC INSTRUMENTATION OF GENERAL USE IN PHYSICS

Shape of the electron Fermi surface of bismuth —V. S. Édel'man. 37(5), 875–80 (Nov. 1973); CPM-7410X0215

11. GENERAL FIELD AND PARTICLE THEORY

11.10.– Field theory

Asymptotics of the Green function and the charge renormalization constant in scalar electrodynamics in the $\alpha_0(\alpha_0 L)^n$–approximation —V. I. Truten'. 37(6), 977–82 (Dec. 1973); CPM-7412X0025
Asymptotic electron terms of colliding identical heavy nuclei —V. P. Zrainov and S. I. Kakharov. 37(6), 983–6 (Dec. 1973); CPM-7412X0031
Radiation transfer in quantum electrodynamics —Yu. M. Golubev. 38 (2), 228–32 (Feb. 1974); CPM-7405F0446
The three-photon interaction in intense fields and scale invariance — V. O. Papanyan and V. I. Ritus. 38(5), 879–85 (May 1974)

12. SPECIFIC THEORIES AND INTERACTION MODELS; PARTICLE SYSTEMATICS

Wilson's method in the static model of the nucleon —A. A. Belavin and M. A. Yurishchev. 37(2), 208–10 (Aug. 1973); CPM-7404E0462

13. SPECIFIC REACTIONS AND PHENOMENOLOGY

Polarization of protons from the $\gamma+p\to\pi^0+p$ reaction produced by 692–1028 MeV photons at 90° in the center-of-mass system —N. V. Goncharov, A. I. Derebchinskiĭ, A. A. Zybalov, O. G. Konovalov, A. E. Tenishev, S. G. Tonapetyan, and V. M. Khvorostyan. 37(2), 205–7 (Aug. 1973); CPM-7404E0459
Induced two-photon synchrotron radiation and Compton scattering in a magnetic field —V. Ch. Zhukovskiĭ and N. S. Nikitina. 37(4), 595–8 (Oct. 1973); CPM-7407X1337
Structure functions of deep inelastic ep scattering —S. I. Bilen'kaya, S. M. Bilen'kiĭ, Yu. M. Kazarinov, and L. I. Lapidus. 38(5), 874–8 (May 1974)
Radiative corrections to bremsstrahlung at high energies —É. A. Kuraev, L. N. Lipatov, N. P. Merenkov, and V. S. Fadin. 38(6), 1076–8 (Jun. 1974)
Oscillations in the total cross section for the charge-exchange reaction $pe+d\to de+p$ —A. V. Matveenko. 38(6), 1082–4 (Jun. 1974)

14. PROPERTIES OF SPECIFIC PARTICLES AND RESONANCES

Dependence of the asymmetry of negative muon decay electrons on the length of the hydrocarbon chain of alcohols and alkyl chlorides —A. A. Dzhuraev, V. S. Esveev, Yu. V. Obukhov, V. S. Roganov, M. V. Frontas'eva, and N. I. Kholodov. 37(6), 974–6 (Dec. 1973); CPM-7412X0022

23. NUCLEAR DECAY AND RADIOACTIVITY

On the problem of the nuclear-transition γ-laser —V. S. Letokhov. 37 (5), 787–93 (Nov. 1973); CPM-7410X0127
New data on the alpha decay of Cr^{249} —S. A. Baranov, V. M. Shatinskiĭ, V. M. Kulakov, and Yu. F. Rodionov. 37(6), 993 (Dec. 1973); CPM-7412X0041
Cascade emission of γ-quanta by highly excited nuclei —V. G. Nosov and A. M. Kamchatnov. 38(1), 6–11 (Jan. 1974); CPM-7405F0006

24. NUCLEAR REACTIONS AND SCATTERING, GENERAL

Polarization kinetics of particles in storage rings —Ya. S. Derbenev and A. M. Kondratenko. 37(6), 968–73 (Dec. 1973); CPM-7412X0016
Suppression of the inelastic channels of a nuclear reaction in a crystal under the conditions of hyperfine splitting —A. M. Afanas'ev and Yu. Kagan. 37(6), 987–92 (Dec. 1973); CPM-7412X0035
Spontaneous positron production in collisions between heavy nuclei — V. S. Popov. 38(1), 18–26 (Jan. 1974); CPM-7405F0018
Violation of P parity in the reaction $^{113}Cd(n,\gamma)^{114}Cd$ —Yu. G. Abov, O. N. Ermakov, and P. A. Krupchitskiĭ. 38(5), 870–3 (May 1974)

25. NUCLEAR REACTIONS AND SCATTERING, SPECIFIC REACTIONS

Photoproduction of π mesons from C^{12} in the photon-energy range from 250 to 1200 MeV —N. V. Goncharov, A. I. Derebchinskiĭ, O. G. Konovalov, S. G. Tonapetyan, and V. M. Khvorostyan. 37 (1), 38–40 (Jul. 1973); CPM-7401D0740
The possibility of creating a nuclear γ laser —V. I. Gol'danskiĭ and Yu. Kagan. 37(1), 49–52 (Jul. 1973); CPM-7401D0751
Violation of P parity in the reaction $^{113}Cd(n,\gamma)^{114}Cd$ —Yu. G. Abov, O. N. Ermakov, and P. A. Krupchitskiĭ. 38(5), 870–3 (May 1974)

28. NUCLEAR ENGINEERING AND NUCLEAR POWER STUDIES

Production of very cold neutrons —V. V. Golikov, V. I. Lushchikov, and F. L. Shapiro. 37(1), 41–4 (Jul. 1973); CPM-7401D0743
On the problem of the nuclear-transition γ-laser —V. S. Letokhov. 37 (5), 787–93 (Nov. 1973); CPM-7410X0127

29. EXPERIMENTAL METHODS AND INSTRUMENTATION FOR ELEMENTARY PARTICLE AND NUCLEAR PHYSICS

The possibility of creating a nuclear γ laser —V. I. Gol'danskiĭ and Yu. Kagan. 37(1), 49–52 (Jul. 1973); CPM-7401D0751
Transition-radiation detection of particles —M. P. Lorikyan. 38(4), 661–2 (Apr. 1974); CPM-7502X0021

31. ATOMS

31.30.– Atomic structure and spectroscopy

A hydrogen–like atom in a superstrong magnetic field —V. P. Krainov. 37(3), 406–7 (Sep. 1973); CPM-7406X1414

Quantum theory of nonlinear oscillators interacting with the medium —M. I. Dykman and M. A. Krivoglaz. 37(3), 506–11 (Sep. 1973); CPM-7406X1514

31.30.H Relativistic corrections

Recoil corrections in a strong nuclear field–M. A. Braun. 37(2), 211–5 (Aug. 1973); CPM-7404E0465

Perturbation theory with allowance for exchange forces —A. A. Rumyantsev. 38(3), 459–62 (Mar. 1974); CPM-7411X0839

Alteration of atomic multiplet in an intense varying field —B. A. Zon and B. G. Katsnel'son. 38(3), 470–5 (Mar. 1974); CPM-7411X0850

Collisional averaging of the stark and Zeeman spectrum structure —A. I. Burshtĕin and G. I. Smirnov. 38(6), 1085–90 (Jun. 1974)

31.30.K Optical spectroscopy

A method for measuring collision broadening of spectral lines —B. V. Rybakov, S. S. Skulachenko, A. M. Khromykh, and I. I. Yudin. 37 (4), 582–3 (Oct. 1973); CPM-7407X1324

Decay of 2S–states of the hydrogen atom in a magnetic field —A. I. Gurevich. 37(4), 610–5 (Oct. 1973); CPM-7407X1352

Field narrowing of spectral lines —É. G. Pestov and S. G. Rautian. 37 (6), 1025–30 (Dec. 1973); CPM-7412X0073

Term intersection in multiparticle interactions —V. S. Lisitsa. 38(3), 435–8 (Mar. 1974); CPM-7411X0815

31.30.N X–ray spectroscopy

Ultrasoft x–ray study of the s–ionization mechanism for noble gases —I. P. Zapesochnyĭ, I. G. Zhukov, and P. V. Fel'tsan. 38(4), 675–9 (Apr. 1974); CPM-7502X0035

31.40.– Fluorescence, resonances, excitations, and energy transfer

Effect of nuclear spin on the exchange line shift in optically pumped gases —V. G. Baryshevskiĭ. 37(4), 605–9 (Oct. 1973); CPM-7407X1347

Laser recombination transitions in CA II and Sr II —E. L. Latush and M. F. Sém. 37(6), 1017–8 (Dec. 1973); CPM-7412X0065

Alteration of atomic multiplet in an intense varying field —B. A. Zon and B. G. Katsnel'son. 38(3), 470–5 (Mar. 1974); CPM-7411X0850

Resonance fluorescence in a strong monochromatic field —E. V. Baklanov. 38(6), 1100–4 (Jun. 1974)

31.60.– Ionization, continuum spectra, electron affinity

Relativistic photoeffect in the H_2 molecule —I. G. Kaplan and A. P. Markin. 37(2), 216–22 (Aug. 1973); CPM-7404E0470

Relativistic compton effect on the bound electron —V. G. Gorshkov, A. I. Mikhailov, and S. G. Sherman. 37(4), 572–8 (Oct. 1973); CPM-7407X1314

Frequency dependence of multiphoton ionization of Xe and Kr atoms —D. T. Alimov, N. K. Berezhetskaya, G. A. Delone, and N. B. Delone. 37(4), 599–601 (Oct. 1973); CPM-7407X1341

Ionization of atoms in radiative collisions —S. I. Yakovlenko. 37(6), 1019–22 (Dec. 1973); CPM-7412X0067

Cross sections for multiphoton ionization of alkali metal atoms —G. A. Delone, N. B. Delone, V. K. Zolotarev, N. L. Manakov, G. K. Piskova, and M. A. Tursunov. 38(2), 236–8 (Feb. 1974); CPM-7405F0454

Ultrasoft x–ray study of the s–ionization mechanism for noble gases —I. P. Zapesochnyĭ, I. G. Zhukov, and P. V. Fel'tsan. 38(4), 675–9 (Apr. 1974); CPM-7502X0035

31.80.+ Mesonic and muonic atoms, and atoms containing abnormal particles

Theory of the interaction of atoms (muonium, positronium) with magnetized substances —V. G. Baryshevskiĭ and A. V. Ivashin. 38 (4), 730–2 (Apr. 1974); CPM-7502X0090

32. MOLECULES

32.60.– Molecular spectroscopy (measurement and phenomenology)

Excitation of vibrational levels in the $N^{14}H_3$ molecule by radiation from a CO_2 laser —R. V. Ambartsumyan, V. S. Letokhov, G. N. Markarov, A. G. Platova, A. A. Puretskiĭ, and O. A. Tumanov. 37 (3), 392–8 (Sep. 1973); CPM-7406X1400

Effect of nuclear spin on the exchange line shift in optically pumped gases —V. G. Baryshevskiĭ. 37(4), 605–9 (Oct. 1973); CPM-7407X1347

Dissociation and belaching of a multilevel molecular gas by high power CO_2 laser radiation —N. V. Karlov, N. A. Karpov, Yu. N. Petrov, and O. M. Stel'makh. 37(6), 1012–6 (Dec. 1973); CPM-7412X0060

Calculation of the energy levels of hydrogen mesic molecules by taking into account adiabatic corrections for nuclear motion —L. I. Ponomarev, I. V. Puzynin, and T. P. Puzynina. 38(1), 14–7 (Jan. 1974); CPM-7405F0014

Collective spontaneous emission by polyatomic systems —I. V. Sokolov and E. D. Trifonov. 38(1), 37–40 (Jan. 1974); CPM-7405F0037

Kinetic model of formation of inverse populations in a carbon monoxide gas–discharge laser —N. N. Sobolev, V. V. Sokovikov, and V. G. Taranenko. 38(1), 44–8 (Jan. 1974); CPM-7405F0044

Calculation of the ground term $X^1\Sigma_g^+$ of the helium quasimolecular doubly–charged ion He_2^{++} by a simple method —T. M. Kereselidze and O. B. Firsov. 38(1), 49–50 (Jan. 1974); CPM-7405F0049

On the theory of vibration–rotation excitation of molecules —R. Z. Vitlina and A. V. Chaplik. 38(2), 224–7 (Feb. 1974); CPM-7405F0442

Probabilities of population of rotational levels by electron excitation of diatomic molecules —P. L. Rubin. 38(4), 684–7 (Apr. 1974); CPM-7502X0044

Fine structure of luminescence spectra of laser–excited organic molecules and the nature of the broad spectral bands of solid solutions —R. I. Personov, E. I. Al'shitz, L. A. Bykovskaya, and B. M. Kharlamov. 38(5), 912–7 (May 1974)

32.90.+ Other topics in molecular physics

Nonlinear narrow density resonances of excited molecules in a standing light wave —V. S. Letokhov and B. D. Pavlik. 37(3), 408–12 (Sep. 1973); CPM-7406X1416

Dependence of the asymmetry of negative muon decay electrons on the length of the hydrocarbon chain of alcohols and alkyl chlorides —A. A. Dzhuraev, V. S. Esveev, Yu. V. Obukhov, V. S. Roganov, M. V. Frontas'eva, and N. I. Kholodov. 37(6), 974–6 (Dec. 1973); CPM-7412X0022

Observation of the negative induction effect by bound hydrogen capture of π^- mesons —L. Vil'gel'mova, P. Zimrot, V. I. Petrukhin, V. E. Risin, L. M. Smirnova, V. M. Suvorov, and I. A. Yutlandov. 38(1), 12–3 (Jan. 1974); CPM-7405F0012

Collision–radiative processes and molecular lasers —M. M. Mkrtchyan, V. T. Platonenko, and R. V. Khokhlov. 38(1), 71–4 (Jan. 1974); CPM-7405F0071

Search for structural effects in π^- meson capture by hydrogen in complex molecules —Z. V. Krumshteĭn, V. I. Petrukhin, V. E. Risin, L. M. Smirnova, V. M. Suvorov, and I. A. Yutlandov. 38(2), 222–3 (Feb. 1974); CPM-7405F0440

The role of the dipole–dipole reservoir in electron–nuclear double resonance at distant nuclei —L. L. Buishvili, M. D. Zviadadze, and N. P. Fokina. 38(6), 1135–8 (Jun. 1974)

34. COLLISION PROCESSES AND INTERACTIONS OF MOLECULES, ATOMS, OR IONS

34.50.– Inelastic processes

Spontaneous positron production in collisions between heavy nuclei — V. S. Popov. **38**(1), 18–26 (Jan. 1974); CPM-7405F0018

Discontinuity of vibrational and translational temperatures in a system with fast-particle sources —A. I. Osipov, A. N. Khmelevskiĭ, and R. V. Khokhlov. **38**(2), 264–6 (Feb. 1974); CPM-7405F0482

Resonance effects in inelastic collisions of slow electrons with cadmium and zinc atoms —O. B. Shpenik, I. P. Zapesochnyĭ, V. V. Sovter, E. É. Kontrosh, and A. N. Zavilopulo. **38**(5), 898–902 (May 1974)

34.70.– Electron scattering

Energy distribution of electrons emitted by argon atoms under electron impact —G. N. Ogurtsov. **37**(4), 584–6 (Oct. 1973); CPM-7407X1326

Electron scattering near the focus of a laser —V. M. Chernenko. **37** (6), 995–1000 (Dec. 1973); CPM-7412X0043

Ultrasoft x-ray study of the s-ionization mechanism for noble gases —I. P. Zapesochnyĭ, I. G. Zhukov, and P. V. Fel'tsan. **38**(4), 675–9 (Apr. 1974); CPM-7502X0035

Probabilities of population of rotational levels by electron excitation of diatomic molecules —P. L. Rubin. **38**(4), 684–7 (Apr. 1974); CPM-7502X0044

Effect of resonances in elastic scattering on the bremsstrahlung of electrons in an atomic field —L. G. D'yachkov, G. A. Kobzev, and G. É. Norman. **38**(4), 697–700 (Apr. 1974); CPM-7502X0057

34.80.+ Charge transfer

Unified formula for the inelastic differential scattering cross sections of atoms and determination of the excited-term parameters —F. A. Elisenkov and V. K. Nikulin. **37**(1), 65–7 (Jul. 1973); CPM-7401D0767

The shape of the total inelastic cross section curves for atomic collisions —M. Ya. Ovchinnikova. **37**(1), 68–72 (Jul. 1973); CPM-7401D0770

Resonant charge exchange between dipole molecules —R. Z. Vitlina. **37**(3), 404–5 (Sep. 1973); CPM-7406X1412

The eikonal method in the three-body problem —G. V. Dubrovskiĭ and A. V. Bodganov. **37**(5), 801–4 (Nov. 1973); CPM-7410X0141

Composition of the slow ions produced upon ionization of gases by high energy protons —Yu. Z. Levchenko, L. I. Pivovar, and G. D. Tolstolutskaya. **37**(6), 1004–6 (Dec. 1973); CPM-7412X0052

34.90.+ Other topics in collision processes and interactions of molecules, atoms, or ions

Interaction of protons and hydrogen atoms with CO molecules —V. V. Afrosimov, G. A. Leĭko, Yu. A. Mamaev, M. N. Panov, and M. Vuiovich. **38**(2), 243–7 (Feb. 1974); CPM-7405F0461

Dips in emission lines of preliminarily polarized molecular (atomic) beams —A. S. Bashkin, A. N. Oraevskiĭ, and A. E. Sakharov. **38** (3), 454–8 (Mar. 1974); CPM-7411X0834

Nonequilibrium vibrational kinetics of molecules in the presence of the field of resonant laser emission —N. G. Basov, A. N. Oraevskiĭ, A. A. Stepanov, and V. A. Shcheglov. **38**(5), 918–26 (May 1974)

35. MACROMOLECULES AND POLYMERS

35.40.– Bulk physical properties

Mechanism of the luminescene of polymer films during their formation as a result of bombardment of solids with ion beams — V. V. Gritsyna, T. S. Kiyan, A. G. Koval', Ya. M. Fogel', A. L. Seryugin, and I. S. Martynov. **37**(1), 108–12 (Jul. 1973); CPM-7401D0810

Contribution to the statistical thermodynamics fusion of long heteropolymer chains —I. M. Lifshitz. **38**(3), 545–9 (Mar. 1974); CPM-7411X0925

State diagram of a polymer globule and the problem of self-organization of its spatial structure —I. M. Lifshitz and A. Yu. Grosberg. **38**(6), 1198–208 (Jun. 1974)

35.90.+ Other topics in macromolecules and polymers

Tunnel spectra of organic solvents —N. I. Bogatina, I. K. Yanson, B. I. Verkin, and A. G. Batrak. **38**(6), 1162–5 (Jun. 1974)

State diagram of a polymer globule and the problem of self-organization of its spatial structure —I. M. Lifshitz and A. Yu. Grosberg. **38**(6), 1198–208 (Jun. 1974)

41. PHYSICS OF GASES

Resonance charge exchange in high density gases —R. S. Vitlina and A. M. Dykhne. **37**(2), 260–2 (Aug. 1973); CPM-7404E0514

Kinetic phenomena in a Knudsen gas with rotational degrees of freedom —V. D. Borman, L. A. Maksimov, B. I. Nikolaev, and V. I. Troyan. **37**(2), 269–73 (Aug. 1973); CPM-7404E0523

Effect of nuclear spin on the exchange line shift in optically pumped gases —V. G. Baryshevskiĭ. **37**(4), 605–9 (Oct. 1973); CPM-7407X1347

Optical breakdown of gases induced by the thermal explosion of suspended macroscopic particles —F. V. Bunkin and V. V. Savranskiĭ. **38**(6), 1091–6 (Jun. 1974)

42. FLUID DYNAMICS

42.35.– Turbulence

Symmetry properties of the collision integral and nonisotropic stationary solutions in weak turbulence theory —A. V. Kats and V. M. Kontorovich. **37**(1), 80–5 (Jul. 1973); CPM-7401D0782

Anisotropic turbulent distributions for waves with a nondecay dispersion law —A. V. Kats and V. M. Kontorovich. **38**(1), 102–7 (Jan. 1974); CPM-7405F0102

On the theory of self-similar degeneracy of homogeneous isotropic turbulence —G. I. Barenblatt and A. A. Gavrilov. **38**(2), 399–402 (Feb. 1974); CPM-7405F0617

42.50.– Shock and detonation phenomena

Synthesis of a high-density phase of silicon dioxide in shock waves — V. N. German, M. A. Podurets, and R. F. Trunin. **37**(1), 107 (Jul. 1973); CPM-7401D0809

Structure of shock waves —A. F. Andreev and A. E. Meierovich. **37** (5), 829–34 (Nov. 1973); CPM-7410X0169

Nonstationary structure of a collisionless shock wave —A. V. Gurevich and L. P. Pitaevskiĭ. **38**(2), 291–7 (Feb. 1974); CPM-7405F0509

Optical breakdown of gases induced by the thermal explosion of suspended macroscopic particles —F. V. Bunkin and V. V. Savranskiĭ. **38**(6), 1091–6 (Jun. 1974)

42.90.+ Other topics in fluid dynamics

Spectroscopy of vapors of low-volatility compounds supercooled in a supersonic stream —D. I. Kataev and A. A. Mal'tsev. **37**(5), 772–7 (Nov. 1973); CPM-7410X0112

Oscillation spectrum of the von Karman vortex street —V. K. Tkachenko. **37**(6), 1148–9 (Dec. 1973); CPM-7412X0196

Effect of collective motions in a fluid on the microscopic magnetic spin parameters —E. M. Iolin. **38**(4), 741–4 (Apr. 1974); CPM-7502X0101

A general theory for the formation of a new phase. Static cavitation in a nonvolatile liquid —B. V. Deryagin. **38**(6), 1129–34 (Jun. 1974)

Couette flow of a nematic liquid —S. A. Pikin. **38**(6), 1246–50 (Jun. 1974)

43. PLASMA PHYSICS

43.20.– Elementary processes in plasma

Optical orientation of metastable He^3 atoms and its influence on the electron density and radiation emitted by helium atoms in a plasma —R. A. Zhitnikov, E. V. Blinov, and L. S. Vlasenko. 37(1), 53–7 (Jul. 1973); CPM-7401D0755

Perturbation of a magnetized plasma by a rapidly moving charge —A. P. Dubovoĭ and A. M. Moskalenko. 37(1), 77–9 (Jul. 1973); CPM-7401D0779

Theory of the anomalous skin effect in a plasma with a diffuse boundary —S. M. Dikman and B. E. Meierovich. 37(5), 835–43 (Nov. 1973); CPM-7410X0175

Theory of Stark broadening of hydrogen lines in plasma —G. V. Sholin, A. V. Demura, and V. S. Lisitsa. 37(6), 1057–65 (Dec. 1973); CPM-7412X0105

Drift oscillations of an inhomogeneous plasma in a quantizing magnetic field —V. V. Kolesov. 38(6), 1107–10 (Jun. 1974)

43.25.– Plasma theory: basic properties and thermodynamics

Rate of energy transfer in a plasma —V. N. Alyamovskiĭ. 37(1), 86–7 (Jul. 1973); CPM-7401D0788

Kinetics of stimulated scattering of Langmuir waves by plasma ions — B. N. Breizman, V. E. Zakharov, and S. L. Musher. 37(4), 658–65 (Oct. 1973); CPM-7407X1400

Transport phenomena in a completely ionized ultrarelativistic plasma —D. I. Dzhavakhishvili and N. L. Tsintsadze. 37(4), 666–71 (Oct. 1973); CPM-7407X1408

Vibrational relaxation of HF and DF in a shock wave —G. K. Vasil'ev, E. F. Makarov, V. G. Papin, and V. L. Tal'rose. 37(6), 1031–3 (Dec. 1973); CPM-7412X0079

The dynamics of plasma–column constrictions and the electromagnetic acceleration of ions —V. S. Imshennik, S. M. Osovets, and I. V. Otroshchenko. 37(6), 1037–44 (Dec. 1973); CPM-7412X0085

Theory of Stark broadening of hydrogen lines in plasma —G. V. Sholin, A. V. Demura, and V. S. Lisitsa. 37(6), 1057–65 (Dec. 1973); CPM-7412X0105

One-dimensionalmotion of a low density plasma in a magnetic field —A. V. Gurevich, L. V. Pariĭskaya, and L. P. Pitaevskiĭ. 37(6), 1071–7 (Dec. 1973); CPM-7412X0119

"Antidynamo"—A possible mechanism of phenomena occurring in neutral layers of a magnetic field —S. I. Vaĭnshteĭn. 38(2), 270–5 (Feb. 1974); CPM-7405F0488

43.30.– Transport, collision, and interaction processes in plasma

43.30.D Transport properties

Thermal ionization wave in a current–carrying system —A. A. Ivanov, V. V. Parail, and T. K. Soboleva. 37(4), 633–6 (Oct. 1973); CPM-7407X1375

43.30.J Emission, absorption, and scattering of radiation

Effect of magnetic field on soft x-ray radiation from laser plasma —T. B. Volyak, S. D. Kaĭtmazov, A. M. Prokhorov, and E. I. Shklovskiĭ. 37(2), 245–6 (Aug. 1973); CPM-7404E0499

Nonstationary theory of decay instability in a weakly inhomogeneous plasma —A. D. Piliya. 37(4), 629–32 (Oct. 1973); CPM-7407X1371

Self–action of radio waves in the vicinity of plasma resonance —V. V. Vas'kov and A. V. Gurevich. 37(4), 646–50 (Oct. 1973); CPM-7407X1388

Turning region of the Poynting vector of a wave incident on an inhomogeneous plasma towards the direction of an external magnetic field —Ya. L. A'lpert and R. N. Kaufman. 37(4), 651–4 (Oct. 1973); CPM-7407X1393

Scattering of radiation by thermal electrons in a magnetic field —Yu. N. Gnedin and R. A. Syunyaev. 38(1), 51–7 (Jan. 1974); CPM-7405F0051

Waves and forces in a homogeneous medium with time–varying properties —G. A. Askar'yan and V. A. Pogosyan. 38(1), 58–60 (Jan. 1974); CPM-7405F0058

Two–level system with damping in a plasma —V. I. Kogan, V. S. Lisitsa, and A. D. Selidovkin. 38(1), 75–82 (Jan. 1974); CPM-7405F0075

High intensity circularly polarized waves in nonlinear dispersive media —K. A. Gorshkov, V. A. Kozlov, and L. A. Ostrovskiĭ. 38(1), 93–5 (Jan. 1974); CPM-7405F0093

Nonlinear dissipation of electromagnetic waves in a plasma —V. V. Pustovalov and V. P. Silin. 38(1), 96–101 (Jan. 1974); CPM-7405F0096

Interaction between an intense electromagnetic wave and a plasma — A. A. Galeev, G. Laval, T. O'Neil, M. N. Rosenbluth, and R. Z. Sagdeev. 38(3), 482–9 (Mar. 1974); CPM-7411X0862

Intensity of stimulated Mandel'shtam–Brillouin scattering in a plasma —L. M. Gorbunov. 38(3), 490–3 (Mar. 1974); CPM-7411X0870

Transition scattering —V. L. Ginzburg and V. N. Tsytovich. 38(5), 909–11 (May 1974)

Nonlinear conversion of radiation into plasma waves —V. V. Pustovalov, V. P. Silin, and V. T. Tikhonchuk. 38(5), 938–43 (May 1974)

Stimulated temperature scattering of electromagnetic waves in a plasma with collisions —N. A. Mityakov, M. I. Rabinovich, V. O. Rapoport, and L. E. Shtil'man. 38(5), 944–6 (May 1974)

Investigation of the reflection of laser radiation from a dense plasma —A. A. Rupasov, G. V. Sklizkov, V. P. Tsapenko, and A. S. Shikanov. 38(5), 947–50 (May 1974)

Bresmstrahlung effect in a strong radiation field —P. V. Elyutin. 38 (6), 1097–9 (Jun. 1974)

43.30.N Beam interactions in plasma

Instability of a narrow electron–beam interacting with a plasma —V. S. Makeev. 38(4), 720–2 (Apr. 1974); CPM-7502X0080

Quasistationary supercooled (recombining) plasma produced by an electron beam in a dense gas —S. V. Antipov, M. V. Nezlin, E. N. Snezhkin, and A. S. Trubnikov. 38(5), 931–7 (May 1974)

Control of instability development in multibeam systems —V. D. Fedorchenko, Yu. P. Mazalov, A. S. Bakaĭ, and B. N. Rutkevich. 38(6), 1111–6 (Jun. 1974)

Investigation of the mechanism of excitation of stochastic oscillations in a beam–plasma discharge —V. A. Lavrovskiĭ, I. F. Kharchenko, and E. G. Shustin. 38(6), 1117–23 (Jun. 1974)

Collective interaction between a monoenergetic beam and a plasma layer —S. S. Kalmykova. 38(6), 1124–8 (Jun. 1974)

43.40.– Plasma flow; magnetohydrodynamics

Electron beam excitation of regular oscillations in an inhomogeneous plasma waveguide —S. S. Kalmykova, V. I. Kurilko, V. I. Kucherov, and A. P. Tolstoluzhsky. 37(2), 240–Q44 (Aug. 1973); CPM-7404E0494

Magnetic and charge neutralization of an electron beam injected into a magnetoactive plasma —S. E. Rosinskiĭ and V. G. Rukhlin. 37 (3), 436–40 (Sep. 1973); CPM-7406X1444

Excitation of ion Langmuir oscillations by a fast ion beam —M. D. Gabovich, A. A. Goncharov, V. Ya. Poritskiĭ, and I. M. Protsenko. 37(4), 655–7 (Oct. 1973); CPM-7407X1397

One–dimensionalmotion of a low density plasma in a magnetic field —A. V. Gurevich, L. V. Pariĭskaya, and L. P. Pitaevskiĭ. 37(6), 1071–7 (Dec. 1973); CPM-7412X0119

43.45.– Plasma waves: oscillations and instabilities

Contribution to the theory of local hydromagnetic stability of toroidal plasma configurations —A. B. Mikhaĭlovskiĭ. 37(2), 274–9 (Aug. 1973); CPM-7404E0528

Development of instability and the neutron emission by a Z–pinch — V. V. Aleksandrov, N. G. Koval'skiĭ, S. Yu. Lukyanov, V. A. Rantsev–Kartinov, and M. M. Stepanenko. 37(4), 622–4 (Oct. 1973); CPM-7407X1364

Nonlinear helical perturbations of a plasma in a tokamak —B. B. Kadomtsev and O. P. Pogutse. 38(2), 283–90 (Feb. 1974); CPM-7405F0501

Instability of a narrow electron–beam interacting with a plasma —V. S. Makeev. 38(4), 720–2 (Apr. 1974); CPM-7502X0080

43.45.D Linear waves and instabilities

Electron beam excitation of regular oscillations in an inhomogeneous plasma waveguide —S. S. Kalmykova, V. I. Kurilko, V. I. Kucherov, and A. P. Tolstoluzhsky. 37(2), 240–Q44 (Aug. 1973); CPM-7404E0494

Low frequency instabilities in a linear plasma betatron —E. I. Lutsenko, L. M. Kontsevoĭ, V. A. Bondarenko, and N. D. Sereda. 37(3), 424–8 (Sep. 1973); CPM-7406X1432

Quasilinear theory of a parametrically unstable magnetoactive plasma —V. V. Pustovalov, V. P. Silin, and V. T. Tikhonchuk. 37(3), 429–35 (Sep. 1973); CPM-7406X1437

Development of instabilities in a Z-pinch —S. M. Osovets, E. I. Pavlov, and V. I. Sinitsyn. 37(4), 625–8 (Oct. 1973); CPM-7407X1367

Polarization spectroscopic analysis of noise produced in annihilation of oppositely moving magnetic fields —M. V. Babykin, A. I. Zhuzhunashvili, E. A. Oks, V. V. Shapkin, and G. V. Sholin. 38 (1), 86–92 (Jan. 1974); CPM-7405F0086

Wave transformation in an inhomogeneous unstable plasma —N. S. Erokhin and S. S. Moiseev. 38(4), 712–9 (Apr. 1974); CPM-7502X0072

Control of instability development in multibeam systems —V. D. Fedorchenko, Yu. P. Mazalov, A. S. Bakaĭ, and B. N. Rutkevich. 38(6), 1111–6 (Jun. 1974)

43.45.F Nonlinear waves and interactions

Electron temperature in a weakly ionized plasma when the skin effect is nonlinear—V. D. Pis'mennyĭ, T. V. Rakhimova, and A. T. Rakhimov. 37(2), 253–6 (Aug. 1973); CPM-7404E0507

Nonlinear ion–sound waves in a plasma with three–dimensional random inhomogeneities —V. V. Tamoĭkin and S. M. Fainshtein. 37(2), 257–9 (Aug. 1973); CPM-7404E0511

Nonlinear theory of the parametric instability of waves in a plasma —V. S. L'vov and A. M. Rubenchik. 37(2), 263–8 (Aug. 1973); CPM-7404E0517

Nonlinear Landau damping of a Langmuir wave packet —D. D. Ryutov and V. N. Khudik. 37(4), 637–40 (Oct. 1973); CPM-7407X1379

Collisionless damping of forced nonlinear plasma oscillations —G. M. Fraĭman. 37(5), 805–8 (Nov. 1973); CPM-7410X0145

On the nonlinear theory of the beam–plasma instability —V. B. Krasovitskiĭ. 37(5), 809–12 (Nov. 1973); CPM-7410X0149

Parametric instabilities in a plasma containing two types of ions —A. B. Kitsenko and K. N. Stepanov. 37(5), 813–9 (Nov. 1973); CPM-7410X0153

Nonlinear oscillations of an unstable plasma —E. Abu–Asali, B. A. Al'terkop, and A. A. Rukhadze. 37(5), 820–2 (Nov. 1973); CPM-7410X0160

Critical velocities for vortex formation by an oscillating disc in helium II and relaxation processes during it rotation —Z. Sh. Nadirashvili and Dzh. S. Tsakadze. 37(5), 844–7 (Nov. 1973); CPM-7410X0184

Nonlinear ion surface oscillations in a semi–restricted current–carrying plasma —E. A. Abu–Asali, B. A. Al'terkop, R. D. Dzhamalov, and A. A. Rukhadze. 37(6), 1034–6 (Dec. 1973); CPM-7412X0082

Nonlinear theory of a quasimonochromatic packet of electrostatic waves in an inhomogeneous plasma —Ya. N. Istomin, V. I. Karpman, and D. R. Shklyar. 37(6), 1045–50 (Dec. 1973)

Nonlinear interaction of high–amplitude Langmuir waves in a collisionless plasma —A. A. Ivanov and M. G. Nikulin. 38(1), 83–5 (Jan. 1974); CPM-7405F0083

Nonlinear dissipation of electromagnetic waves in a plasma —V. V. Pustovalov and V. P. Silin. 38(1), 96–101 (Jan. 1974); CPM-7405F0096

Instability of waveguides and solitons in nonlinear media —V. E. Zakharov and A. M. Rubenchik. 38(3), 494–500 (Mar. 1974); CPM-7411X0874

Nonlinear interaction of space–charge waves with trapped electrons —A. A. Ivanov, S. M. Korshunov, N. S. Beryuleva, and S. P. Tarasov. 38(5), 927–30 (May 1974)

Nonlinear conversion of radiation into plasma waves —V. V. Pustovalov, V. P. Silin, and V. T. Tikhonchuk. 38(5), 938–43 (May 1974)

Control of instability development in multibeam systems —V. D. Fedorchenko, Yu. P. Mazalov, A. S. Bakaĭ, and B. N. Rutkevich. 38(6), 1111–6 (Jun. 1974)

Investigation of the mechanism of excitation of stochastic oscillations in a beam–plasma discharge —V. A. Lavrovskiĭ, I. F. Kharchenko, and E. G. Shustin. 38(6), 1117–23 (Jun. 1974)

43.45.J Shock waves

Structure of shock waves —A. F. Andreev and A. E. Meierovich. 37 (5), 829–34 (Nov. 1973); CPM-7410X0169

Vibrational relaxation of HF and DF in a shock wave —G. K. Vasil'ev, E. F. Makarov, V. G. Papin, and V. L. Tal'rose. 37(6), 1031–3 (Dec. 1973); CPM-7412X0079

The structure of a shock wave in a radiation–dominated plasma —Ya. B. Zel'dovich and A. F. Illarionov. 38(4), 643–7 (Apr. 1974); CPM-7502X0003

43.45.M Plasma turbulence

Strong plasma turbulences at helicon frequencies —S. I. Vainshtein. 37(1), 73–6 (Jul. 1973); CPM-7401D0775

Electron–acoustic and drift instabilities in a finite–pressure plasma with a perpendicular current —J. P. Goedbloed, A. I. Pyatak, and V. L. Sizonenko. 37(6), 1051–6 (Dec. 1973); CPM-7412X0099

Polarization spectroscopic analysis of noise produced in annihilation of oppositely moving magnetic fields —M. V. Babykin, A. I. Zhuzhunashvili, E. A. Oks, V. V. Shapkin, and G. V. Sholin. 38 (1), 86–92 (Jan. 1974); CPM-7405F0086

Anisotropic turbulent distributions for waves with a nondecay dispersion law —A. V. Kats and V. M. Kontorovich. 38(1), 102–7 (Jan. 1974); CPM-7405F0102

43.50.– Plasma production and heating

Stochastic heating of plasma during the development of Langmuir turbulence instability —F. Kh. Khakimov and V. N. Tsytovich. 37 (4), 641–5 (Oct. 1973); CPM-7407X1383

Parametric instabilities in a plasma containing two types of ions —A. B. Kitsenko and K. N. Stepanov. 37(5), 813–9 (Nov. 1973); CPM-7410X0153

Kinetic model of formation of inverse populations in a carbon monoxide gas–discharge laser —N. N. Sobolev, V. V. Sokovikov, and V. G. Taranenko. 38(1), 44–8 (Jan. 1974); CPM-7405F0044

Nonlinear interaction of high–amplitude Langmuir waves in a collisionless plasma —A. A. Ivanov and M. G. Nikulin. 38(1), 83–5 (Jan. 1974); CPM-7405F0083

43.55.– Plasma equilibrium and confinement

Interaction between a high frequency magnetic field and potential plasma oscillations in a Q–device —L. L. Artsimovich, A. A. Ivanov, A. N. Luk'yanchuk, V. L. Papernyĭ, V. D. Rusanov, and S. S. Sobolev. 37(2), 236–9 (Aug. 1973); CPM-7404E0490

Contribution to the theory of local hydromagnetic stability of toroidal plasma configurations —A. B. Mikhaĭlovskiĭ. 37(2), 274–9 (Aug. 1973); CPM-7404E0528

Investigation of equilibrium and stability of self–contracted discharges in an optically dense plasma —A. F. Aleksandrov, V. V. Zosimov, A. A. Rukhadze, V. I. Savoskin, and I. B. Timofeev. 37(5), 794–800 (Nov. 1973); CPM-7410X0134

On the nonlinear theory of the beam–plasma instability —V. B. Krasovitskiĭ. 37(5), 809–12 (Nov. 1973); CPM-7410X0149

Experiments on plasma confinement in a magnetic multimirror trap —G. I. Budker, V. V. Danilov, E. P. Kruglyakov, D. D. Ryutov, and E. V. Shunko. 38(2), 276–82 (Feb. 1974); CPM-7405F0494

Nonlinear helical perturbations of a plasma in a tokamak —B. B. Kadomtsev and O. P. Pogutse. 38(2), 283–90 (Feb. 1974); CPM-7405F0501

43.60.– Plasma diagnostics

Spectral diagnostics of the plasma plume produced in intense metal evaporation under laser radiation —V. A. Batanov, V. A. Bogatyrev, N. K. Sukhodrev, and V. B. Fedorov. 37(3), 419–23 (Sep. 1973); CPM-7406X1427

43.75.+ Plasma simulation

Nonlinear interaction of space–charge waves with trapped electrons —A. A. Ivanov, S. M. Korshunov, N. S. Beryuleva, and S. P. Tarasov. 38(5), 927–30 (May 1974)

43.80.– Electric discharges

Recombination of the role of negative ions in a high-frequency gas discharge —M. A. Liberman and B. É. Meierovich. 37(6), 1066–70 (Dec. 1973); CPM-7412X0114

Non-self-sustained stationary gas discharge induced by electron-beam ionization in N_2–CO_2 mixtures at atmospheric pressure —E. P. Velikhov, S. A. Golubev, Yu. K. Zemtsov, A. F. Pal', I. G. Persiantsev, V. D. Pis'mennyĭ, and A. T. Rakhimov. 38(2), 267–9 (Feb. 1974); CPM-7405F0485

Alignment of excited atoms in a gas discharge —V. I. Perel' and I. V. Rogova. 38(3), 501–4 (Mar. 1974); CPM-7411X0881

51. STRUCTURE OF LIQUIDS AND SOLIDS; CRYSTALLOGRAPHY

51.10.– Techniques for determination of lattice and defect structures

Influence of a magnetic field on the crystal structure of dypsprosium, III —V. A. Finkel' and V. S. Belovol. 37(1), 90–3 (Jul. 1973); CPM-7401D0792

Universality of the power spectra of relativistic electrons produced in a turbulent plasma —Yu. A. Nikolaev, V. N. Tsytovich, and A. S. Chikhachev. 37(3), 445–8 (Sep. 1973); CPM-7406X1453

Dynamic scattering of x-rays by dislocations —F. N. Chukhovskiĭ and A. A. Shtol'berg. 37(3), 525–9 (Sep. 1973); CPM-7406X1533

Dynamic suppression of the maxima of interference bremsstrahlung emitted by ultrafast electrons in a single crystal —N. P. Kalashnikov. 37(4), 723–4 (Oct. 1973); CPM-7407X1465

Optical frequency modulation of electrons diffracted by a crystal —V. V. Fedorov, K. E. Kir'yanov, and A. I. Smirnov. 37(4), 737–8 (Oct. 1973); CPM-7407X1479

Electron diffraction in a strong field by dielectric crystals —D. F. Zaretskiĭ and V. V. Lomonosov. 38(1), 140–2 (Jan. 1974); CPM-7405F0140

51.20.– Liquid structure and morphology

Tensile strength of liquid hydrogen —V. A. Akulichev and V. A. Bulanov. 38(2), 329–30 (Feb. 1974); CPM-7405F0547

Absorption and dispersion of ultrasound and hypersound in glycerine —A. A. Berdyev, V. A. Lysenko, and B. Khemraev. 38(3), 515–6 (Mar. 1974); CPM-7411X0895

Attainable overheating of liquid argon —V. G. Baĭdakov, V. P. Skripov, and A. M. Kaverin. 38(3), 557–60 (Mar. 1974); CPM-7411X0937

51.70.– Defects in crystals

Dynamic scattering of x-rays by dislocations —F. N. Chukhovskiĭ and A. A. Shtol'berg. 37(3), 525–9 (Sep. 1973); CPM-7406X1533

Polarization-optical investigation of magnetization processes near dislocations in yttrium iron garnet single crystals —V. K. Vlasko-Vlasov, L. M. Dedukh, and V. I. Nikitenko. 38(1), 184–94 (Jan. 1974); CPM-7405F0184

Theory of particle transfer in extremely narrow bands —Yu. Kagan and L. A. Maksimov. 38(2), 307–11 (Feb. 1974); CPM-7405F0525

Effect of dislocations on the electric properties of p-germanium —Yu. A. Osip'yan and S. A. Shevchenko. 38(2), 345–8 (Feb. 1974); CPM-7405F0563

A possible mechanism for the peak effect in hard superconductors — G. Kluge and V. Rudat. 38(4), 738–40 (Apr. 1974); CPM-7502X0098

Dissipation of the energy of a dislocation moving in a random field of internal stresses —A. A. Alekseev and B. M. Strunin. 38(6), 1144–6 (Jun. 1974)

Interaction of dislocations with hole centers in colored alkali–halid crystals —F. D. Senchukov and S. Z. Shmurak. 38(6), 1177–80 (Jun. 1974)

51.80.– Radiation damage and other irradiation effects

"Needle" Vavilov–Cerenkov radiation in a Rochelle salt crystal —V. P. Zrelov, P. Pavlovich, and P. Sulek. 37(1), 127–31 (Jul. 1973); CPM-7401D0829

Group and successive pair collisions in scattering of Cs^+ ions by tungsten single crystals —V. I. Veksler and V. V. Evstifeev. 37(2), 290–3 (Aug. 1973); CPM-7404E0544

Theory of the channeling effect: II. Influence of inelastic collisions — Yu. Kagan and Yu. V. Kononets. 37(3), 530–40 (Sep. 1973); CPM-7406X1538

Localization of electrons in a magnetic field —B. I. Shklovskiĭ and A. L. Éfros. 37(6), 1122–7 (Dec. 1973); CPM-7412X0170

Radiation by electrons due to roughness of a metallic surface —F. R. Arutyunyan, A. Kh. Mkhitaryan, R. A. Oganesyan, and B. O. Rostomyan. 38(5), 886–90 (May 1974)

Excitation of acoustic oscillations by a low density beam of charged particles —A. I. Kalinichenko and V. T. Lazurik–Él'tsufin. 38(6), 1181–3 (Jun. 1974)

51.90.+ Other topics in structure of liquids and solids

Crystal structure and magnetic properties of substances with orbital degeneracy —K. I. Kugel' and D. I. Khomskiĭ. 37(4), 725–30 (Oct. 1973); CPM-7407X1467

Optical activity in the isotropic phase of cholesteric liquid crystals — E. I. Kats. 38(6), 1242–5 (Jun. 1974)

52. MECHANICAL AND ACOUSTIC PROPERTIES OF CONDENSED MATTER

52.20.– Mechanical properties of solids

On the thermodynamics of face-centered tetragonal ⇄ face-centered cubic transitions in indium alloys —V. M. Polovov and E. G. Ponyatovskiĭ. 37(3), 476–80 (Sep. 1973); CPM-7406X1484

Effect of high hydrostatic pressure and residual strain on the superconductivity of Nb–Al–Ge alloys with an A15-type structure —V. N. Galev and A. G. Rabin'kin. 38(3), 525–32 (Mar. 1974); CPM-7411X0905

Effect of the multivalley structure of the conduction band on helical instability in the electron–hole plasma of silicon —V. M. Bondar, V. V. Vladimirov, N. I. Kononenko, O. G. Sarbeĭ, and A. I. Shchedrin. 38(3), 542–4 (Mar. 1974); CPM-7411X0922

Plastic deformation of solidified inert gases —I. N. Krupskiĭ, A. V. Leont'eva, and Yu. S. Stroilov. 38(5), 957–9 (May 1974)

52.30.+ Mechanical and elastic waves

Waves and forces in a homogeneous medium with time-varying properties —G. A. Askar'yan and V. A. Pogosyan. 38(1), 58–60 (Jan. 1974); CPM-7405F0058

Giant quantum oscillations of Rayleigh sound wave absorption in metals —A. M. Grishin and É. A. Kaner. 38(2), 365–72 (Feb. 1974); CPM-7405F0583

Phase modulation of Mössbauer spectra and the generation of ultrasound in metals by a radio-frequency field —I. A. Dubovtsev, P. S. Zyryanov, and N. P. Filippova. 38(3), 509–14 (Mar. 1974); CPM-7411X0889

52.50.+ High pressure effects in solids

Synthesis of a high-density phase of silicon dioxide in shock waves — V. N. German, M. A. Podurets, and R. F. Trunin. 37(1), 107 (Jul. 1973); CPM-7401D0809

Effect of high uniform pressure and residual stress on the superconductivity of alloys of the $V_3(Si_{1-x}Ge_x)$ system —A. G. Rabinkin, V. N. Galev, and V. N. Laukhin. 37(5), 870–4 (Nov. 1973); CPM-7410X0210

Phase transition induced in KCl by pressure at low temperatures —V. N. Laukhin, A. G. Rabin'kin, and É. I. Éstrin. 37(6), 1150–2 (Dec. 1973); CPM-7412X0198

High-temperature resistivity and the superconductivity of potassium and rubidium at high pressures —G. M. Gandelman, O. Yu. Itskovich, P. S. Kondratenko, I. P. Perstnev, and V. M. Finkelberg. 38(1), 111–5 (Jan. 1974); CPM-7405F0111

Antiferromagnetic resonance investigation of the magnetoelastic interaction in hematite —P. P. Maksimenkov and V. I. Ozhogin. 38(2), 324–8 (Feb. 1974); CPM-7405F0542

Effect of high hydrostatic pressure and residual strain on the superconductivity of Nb–Al–Ge alloys with an A15-type structure —V. N. Galev and A. G. Rabin'kin. **38**(3), 525–32 (Mar. 1974); CPM-7411X0905

Influence of hydrostatic pressure on the splitting of the Landau levels in tellurium —V. B. Anzin, M. S. Bresler, E. S. Itskevich, Yu. V. Kosichkin, V. A. Sukhoparov, A. N. Tolmachev, and I. I. Farbshtein. **38**(4), 755–8 (Apr. 1974); CPM-7502X0115

Effect of pressure on magnetic transformations in an iron–rhodium alloy —G. T. Dubovka. **38**(6), 1140–3 (Jun. 1974)

Effect of pressure on the Fermi surface of zinc —V. A. Venttsel', C. A. Voronov, A. I. Likhter, and A. V. Rudnev. **38**(6), 1220–4 (Jun. 1974)

52.70.+ Acoustic properties of solids

Effect of ultrasonic surface waves on liquid crystals —O. A. Kapustina and Yu. G. Statnikov. **37**(1), 117–9 (Jul. 1973); CPM-7401D0819

Critical singularities of the propagation of ultrasonic waves in yttrium iron garnet near the Curie point —I. K. Kamilov and Kh. K. Aliev. **38**(5), 954–6 (May 1974)

Dispersion of sound velocity and the electron relaxation time in bismuth and antimony —A. P. Korolyuk, M. A. Obolenskiĭ, and V. I. Beletskii. **38**(5), 979–82 (May 1974)

Excitation of acoustic oscillations by a low density beam of charged particles —A. I. Kalinichenko and V. T. Lazurik–Él'tsufin. **38**(6), 1181–3 (Jun. 1974)

52.90.+ Other topics in mechanical and acoustical properties of condensed matter

Critical singularities of the propagation of ultrasonic waves in yttrium iron garnet near the Curie point —I. K. Kamilov and Kh. K. Aliev. **38**(5), 954–6 (May 1974)

Electromagnetic excitation of sound in a metal located in a magnetic field parallel to the surface —V. L. Fal'ko. **38**(6), 1184–8 (Jun. 1974)

53. LATTICE DYNAMICS

53.20.– Phonons and vibrations in crystal lattices

Quantum theory of Crowdions at low temperatures —D. I. Pushkarov. **37**(2), 322–5 (Aug. 1973); CPM-7404E0576

Fine structure of cyclotron–phonon resonance lines —R. K. Bakanas, I. B. Levinson, and A. Yu. Matulis. **37**(3), 541–4 (Sep. 1973); CPM-7406X1549

53.20.D Phonon states and bands, normal modes, and phonon dispersion

Effect of the low–frequency peaks of the phonon state density on the critical temperature of superconductors —M. V. Medvedev, É. A. Pashitskiĭ, and Yu. S. Pyatiletov. **38**(3), 587–92 (Mar. 1974); CPM-7411X0967

Quadrupole phonon echo of a system of three–level particles in a cubic crystal field —U. Kh. Kopvillem and V. R. Rizaev. **38**(6), 1147–52 (Jun. 1974)

53.20.K Phonon–electron interactions

Alteration of the superconducting properties of vanadium by introduction of tantalum impurity atoms —N. A. Chernoplekov, G. Kh. Panova, B. N. Samoĭlov, and A. A. Shikov. **37**(1), 102–6 (Jul. 1973); CPM-7401D0804

Superconductivity and electron structure of a solid solution of titanium in niobium —I. S. Shchetkin and T. N. Kharchenko. **37**(3), 491–3 (Sep. 1973); CPM-7406X1499

Anisotropy of the probability of electron scattering by phonons on the Fermi surface of copper —V. F. Gantmakher and V. A. Gasparov. **37**(5), 864–9 (Nov. 1973); CPM-7410X0204

Electron–phonon interaction and cyclotron resonance in lead —I. Ya. Krasnopolin and M. S. Khaĭkin. **37**(5), 883–9 (Nov. 1973); CPM-7410X0223

Study of phase transitions in KD_2PO_4 single crystals by the acoustic magnetic resonance technique —Kh. G. Bogdanova, Yu. V. Vladimirtsev, V. A. Golenishchev–Kutuzov, and U. Kh. Kopvillem. **38**(3), 505–8 (Mar. 1974); CPM-7411X0885

Mobility of piezopolaron in the case of strong coupling —G. E. Volovik and V. M. Édel'shteĭn. **38**(5), 972–6 (May 1974)

Theory of polarons in multivalley crystals. III. Arbitrary coupling force between the electron and the lattice polarization vibrations —S. I. Pekar, L. S. Khazan, and V. I. Sheka. **38**(5), 999–1002 (May 1974)

Self–action of a hypersonic wave in acoustic paramegnetic resonance —E. M. Ganapol'skiĭ. **38**(6), 1209–14 (Jun. 1974)

53.90.+ Other topics in lattice dynamics

Study of the Debye–Waller factor near the temperature of a phase transition of the first kind in cobalt —B. S. Bokshteĭn, Yu. B. Voĭtkovskiĭ, G. S. Nikol'skiĭ, and I. M. Razumovskiĭ. **37**(2), 283–4 (Aug. 1973); CPM-7404E0537

Bose–Einstein condensation of dipole–active excitons and photons — S. A. Moskalenko, M. F. Miglei, M. I. Shmiglyuk, P. I. Khadzhi, and A. V. Lelyakov. **37**(5), 902–8 (Nov. 1973); CPM-7410X0242

Reflection of conduction electrons from an atomically pure (110) face a of a tungsten crystal —P. P. Lutsishin, O. A. Panchenko, and A. A. Kharlamov. **37**(6), 1083–5 (Dec. 1973); CPM-7412X0131

54. EQUATIONS OF STATE, PHASE EQUILIBRIA, AND PHASE TRANSITIONS

54.70.– General studies of phase transitions and critical points

Behavior of the specific heat of the ferroelectric phase of KH_2PO_4 near the transition temperature —S. R. Garber and L. A. Smolenko. **37**(1), 94–101 (Jul. 1973); CPM-7401D0796

Synthesis of a high–density phase of silicon dioxide in shock waves — V. N. German, M. A. Podurets, and R. F. Trunin. **37**(1), 107 (Jul. 1973); CPM-7401D0809

Study of the Debye–Waller factor near the temperature of a phase transition of the first kind in cobalt —B. S. Bokshteĭn, Yu. B. Voĭtkovskiĭ, G. S. Nikol'skiĭ, and I. M. Razumovskiĭ. **37**(2), 283–4 (Aug. 1973); CPM-7404E0537

On the thermodynamics of face–centered tetragonal ⇄ face–centered cubic transitions in indium alloys —V. M. Polovov and E. G. Ponyatovskiĭ. **37**(3), 476–80 (Sep. 1973); CPM-7406X1484

Temperature dependence of the viscosity of binary solutions near the critical solution temperature —N. V. Kuskova and E. V. Matizen. **37**(3), 501–3 (Sep. 1973); CPM-7406X1509

Critical phenomena in a liquid in a strong electric field —V. L. Pokrovskiĭ and S. V. Fomichev. **37**(4), 731–2 (Oct. 1973); CPM-7407X1473

Experimental investigation of some peculiarities of the equation of state of heptane near the critical point —L. M. Artyukhovskaya, E. T. Shimanskaya, and Yu. I. Shimanskiĭ. **37**(5), 848–51 (Nov. 1973); CPM-7410X0188

Phase transition induced in KCl by pressure at low temperatures —V. N. Laukhin, A. G. Rabin'kin, and É. I. Éstrin. **37**(6), 1150–2 (Dec. 1973); CPM-7412X0198

Critical fluctuations in external fields —E. L. Lakoza, V. M. Sysoev, and A. V. Chalyĭ. **38**(2), 298–303 (Feb. 1974); CPM-7405F0516

54.90.+ Other topics in equations of state, phase equilibria, and phase transitions

Thin layers in acoustics and optics. changes in the transmission and reflection of sound and light on creation of a thin gas layer on the surface of a body in a liquid —G. A. Askar'yan, É. F. Bolshakov, E. Ya. Golts, and V. P. Logvinenko. **37**(4), 587–9 (Oct. 1973); CPM-7407X1329

Experimental investigation of some peculiarities of the equation of state of heptane near the critical point —L. M. Artyukhovskaya, E. T. Shimanskaya, and Yu. I. Shimanskiĭ. **37**(5), 848–51 (Nov. 1973); CPM-7410X0188

Phase transition in multivalley semiconductors in a magnetic field —V. A. Kochelap and V. N. Sokolov. 38(2), 408–12 (Feb. 1974); CPM-7405F0626
Attainable overheating of liquid argon —V. G. Baĭdakov, V. P. Skripov, and A. M. Kaverin. 38(3), 557–60 (Mar. 1974); CPM-7411X0937
Investigation of the electronic mechanism of the isomorphic phase transition in cerium —V. A. Shaburov, I. M. Band, A. I. Grushko, T. B. Mezentseva, E. V. Petrovich, Yu. P. Smirnov, A. E. Sovestnov, O. I. Sumbaev, M. B. Trzhaskovskaya, and I. A. Markova. 38(3), 573–81 (Mar. 1974); CPM-7411X0953
Theory of "diffuse" phase transitions —B. Ya. Balagurov and V. G. Vaks. 38(4), 799–808 (Apr. 1974); CPM-7502X0159

55. THERMAL PROPERTIES OF CONDENSED MATTER

55.40.– Heat capacities of solids

Behavior of the specific heat of the ferroelectric phase of KH_2PO_4 near the transition temperature —S. R. Garber and L. A. Smolenko. 37(1), 94–101 (Jul. 1973); CPM-7401D0796
Specific heat and spin paramagnetism of an electron gas in the presence of resonant scattering impurities —A. P. Kochkin. 37(1), 178–82 (Jul. 1973); CPM-7401D0880
Thermodynamics of layered isotropic magnets at low temperatures —V. L. Berezinskiĭ and A. Ya. Blank. 37(2), 369–76 (Aug. 1973); CPM-7404E0623
Superconductivity and electron structure of a solid solution of titanium in niobium —I. S. Shchetkin and T. N. Kharchenko. 37 (3), 491–3 (Sep. 1973); CPM-7406X1499
The equation of state and the isochoric specific heat near the critical points of liquids —A. T. Berestov, M. Sh. Giterman, and N. G. Shmakov. 37(6), 1128–32 (Dec. 1973); CPM-7412X0176
Specific heat of the antiferromagnetic garnet $Ca_3Mn_2Ge_3O_{12}$ —K. P. Belov, T. V. Valyanskaya, L. G. Mamsurova, and V. I. Sokolov. 38 (3), 561–4 (Mar. 1974); CPM-7411X0941
Anomalies of the specific heat of samarium at high temperatures —V. M. Polovov. 38(4), 775–8 (Apr. 1974); CPM-7502X0135

55.90.+ Other topics in thermal properties of condensed matter

Spin diffusion in solid He^3–He^4 solutions —V. N. Grigor'ev, B. N. Esel'son, and V. A. Mikheev. 37(2), 309–10 (Aug. 1973); CPM-7404E0563
The equation of state and the isochoric specific heat near the critical points of liquids —A. T. Berestov, M. Sh. Giterman, and N. G. Shmakov. 37(6), 1128–32 (Dec. 1973); CPM-7412X0176
Thermal expansion of thulium in the 2–300 °K temperature range —N. S. Petrenko and V. P. Popov. 38(1), 123–4 (Jan. 1974); CPM-7405F0123

56. TRANSPORT PROPERTIES OF CONDENSED MATTER (NONELECTRONIC)

56.20.+ Viscosity of liquids

Temperature dependence of the viscosity of binary solutions near the critical solution temperature —N. V. Kuskova and E. V. Matizen. 37(3), 501–3 (Sep. 1973); CPM-7406X1509

56.30.– Diffusion in solids

Mössbauer investigation of the relation between the electron structure and the diffusion properties of impurity atoms —B. S. Bokshtein and A. A. Zhukhovitskiĭ. 37(1), 88–9 (Jul. 1973); CPM-7401D0790
Quantum theory of Crowdions at low temperatures —D. I. Pushkarov. 37(2), 322–5 (Aug. 1973); CPM-7404E0576
Electron drag elastic field sources and the conductivity of metals —V. I. Al'shitz and V. L. Indenbom. 37(5), 914–7 (Nov. 1973); CPM-7410X0254
Theory of particle transfer in extremely narrow bands —Yu. Kagan and L. A. Maksimov. 38(2), 307–11 (Feb. 1974); CPM-7405F0525
Isotopic equilibrium in a hydrogen plus alkali–metal hydroxide system —Yu. M. Baĭkov and G. Ya. Ryskin. 38(3), 628–9 (Mar. 1974); CPM-7411X1008

57. LIQUID AND SOLID HELIUM; QUANTUM FLUIDS

57.20.– General properties of fluids obeying quantum statistics

Oscillation damping of the free surface of a superfluid liquid —D. A. Kompaneets. 38(1), 125–8 (Jan. 1974); CPM-7405F0125

57.20.C Elementary excitations

High density bose gas with strong attraction between the particles —V. S. Babichenko. 37(2), 311–6 (Aug. 1973); CPM-7404E0565
Quantum vortices and phase transitions in Bose systems —V. N. Popov. 37(2), 341–5 (Aug. 1973); CPM-7404E0595
Critical velocities at very low temperatures, and the vortices in a quantum bose fluid —É. B. Sonin. 37(3), 494–500 (Sep. 1973); CPM-7406X1502
On the theory of elementary-excitation spectrum in liquid He^4 —Yu. A. Nepomnyashchiĭ and A. A. Nepomnyashchiĭ. 38(1), 134–9 (Jan. 1974); CPM-7405F0134
Effect of anomalies of the energy spectrum on relaxation phenomena in helium II —Yu. A. Matveev. 38(3), 582–6 (Mar. 1974); CPM-7411X0962
Structure of the bound-state spectrum of two rotons in superfluid helium —L. P. Pitaevskiĭ and I. A. Fomin. 38(6), 1257–9 (Jun. 1974)

57.20.E Ions and charged impurities

Interaction between impurity excitations and negative ions in liquid helium —V. B. Shikin. 37(4), 718–22 (Oct. 1973); CPM-7407X1460
Mobility of positive ions in He^3–He^4 solutions —V. N. Bondarev and I. Z. Fisher. 38(3), 597–9 (Mar. 1974); CPM-7411X0977

57.20.G Two-fluid hydrodynamics

Absorption of first sound in liquid He^3 —N. E. Dyumin, B. N. Esel'son, and É. Ya. Rudavskiĭ. 38(1), 116–8 (Jan. 1974); CPM-7405F0116
Tensile strength of liquid hydrogen —V. A. Akulichev and V. A. Bulanov. 38(2), 329–30 (Feb. 1974); CPM-7405F0547

57.20.L Vortex motion

Quantum vortices and phase transitions in Bose systems —V. N. Popov. 37(2), 341–5 (Aug. 1973); CPM-7404E0595
Critical velocities at very low temperatures, and the vortices in a quantum bose fluid —É. B. Sonin. 37(3), 494–500 (Sep. 1973); CPM-7406X1502
Critical velocities for vortex formation by an oscillating disc in helium II and relaxation processes during it rotation —Z. Sh. Nadirashvili and Dzh. S. Tsakadze. 37(5), 844–7 (Nov. 1973); CPM-7410X0184
Vortex energy in helium II —Dzh. S. Tsakadze. 38(2), 304–6 (Feb. 1974); CPM-7405F0522

57.20.N Thermodynamics

High density bose gas with strong attraction between the particles —V. S. Babichenko. 37(2), 311–6 (Aug. 1973); CPM-7404E0565

57.20.Q Critical point phenomena

Quantum vortices and phase transitions in Bose systems —V. N. Popov. 37(2), 341–5 (Aug. 1973); CPM-7404E0595

57.20.S Transport processes

Interaction between impurity excitations and negative ions in liquid helium —V. B. Shikin. 37(4), 718–22 (Oct. 1973); CPM-7407X1460

Measurement of the relaxation time on acceleration of vessels with helium II and superfluidity in pulsars —J. S. Tsakadze and S. J. Tsakadze. 37(5), 918–21 (Nov. 1973); CPM-7410X0258
Free electrons on the surface of liquid helium in the presence of external fields —V. B. Shikin and Yu. P. Monarkha. 38(2), 373–7 (Feb. 1974); CPM-7405F0591
Mobility of positive ions in He^3–He^4 solutions —V. N. Bondarev and I. Z. Fisher. 38(3), 597–9 (Mar. 1974); CPM-7411X0977

57.20.W Optical properties

Role of self-focusing of laser radiation on breakdown in liquid He^4 — I. I. Abrikosova and B. V. Anshukov. 37(4), 579–81 (Oct. 1973); CPM-7407X1321

57.40.– Liquid helium–4

High density bose gas with strong attraction between the particles — V. S. Babichenko. 37(2), 311–6 (Aug. 1973); CPM-7404E0565
Quantum vortices and phase transitions in Bose systems —V. N. Popov. 37(2), 341–5 (Aug. 1973); CPM-7404E0595
Critical velocities at very low temperatures, and the vortices in a quantum bose fluid —É. B. Sonin. 37(3), 494–500 (Sep. 1973); CPM-7406X1502
Role of self-focusing of laser radiation on breakdown in liquid He^4 — I. I. Abrikosova and B. V. Anshukov. 37(4), 579–81 (Oct. 1973); CPM-7407X1321
Interaction between solitons in a stable medium —V. E. Zakharov and A. B. Shabat. 37(5), 823–8 (Nov. 1973); CPM-7410X0163
On the theory of elementary-excitation spectrum in liquid He^4 —Yu. A. Nepomnyashchiĭ and A. A. Nepomnyashchiĭ. 38(1), 134–9 (Jan. 1974); CPM-7405F0134
Vortex energy in helium II —Dzh. S. Tsakadze. 38(2), 304–6 (Feb. 1974); CPM-7405F0522
Free electrons on the surface of liquid helium in the presence of external fields —V. B. Shikin and Yu. P. Monarkha. 38(2), 373–7 (Feb. 1974); CPM-7405F0591
Effect of anomalies of the energy spectrum on relaxation phenomena in helium II —Yu. A. Matveev. 38(3), 582–6 (Mar. 1974); CPM-7411X0962

57.60.– Liquid helium–3, –4 mixtures

Interaction between impurity excitations and negative ions in liquid helium —V. B. Shikin. 37(4), 718–22 (Oct. 1973); CPM-7407X1460
On the superfluidity of the Fermi component in a Fermi–Bose gas and in He^3–He^4 solutions —V. A. Andrianov and V. N. Popov. 37(5), 940–1 (Nov. 1973); CPM-7410X0280
Mobility of positive ions in He^3–He^4 solutions —V. N. Bondarev and I. Z. Fisher. 38(3), 597–9 (Mar. 1974); CPM-7411X0977

58. SURFACES AND INTERFACES; THIN FILMS AND WHISKERS

Thin layers in acoustics and optics. changes in the transmission and reflection of sound and light on creation of a thin gas layer on the surface of a body in a liquid —G. A. Askar'yan, É. F. Bolshakov, E. Ya. Golts, and V. P. Logvinenko. 37(4), 587–9 (Oct. 1973); CPM-7407X1329
Phonon transition radiation —V. M. Levin, V. I. Pustovoĭt, and L. A. Chernozatonskiĭ. 37(5), 909–13 (Nov. 1973); CPM-7410X0249
Giant quantum oscillations of Rayleigh sound wave absorption in metals —A. M. Grishin and É. A. Kaner. 38(2), 365–72 (Feb. 1974); CPM-7405F0583

61. ELECTRON STATES

61.10.+ General theories and computational techniques

Nonlinear effects due to the propagation of sound and electromagnetic waves in conductors in a quantizing magnetic field —V. Ya. Demikhovskiĭ and A. P. Kopasov. 37(3), 512–5 (Sep. 1973); CPM-7406X1520
Theory of particle transfer in extremely narrow bands —Yu. Kagan and L. A. Maksimov. 38(2), 307–11 (Feb. 1974); CPM-7405F0525

61.15.+ Classical and semiclassical theories of liquid structure

The dynamics of the expansion of a vapor when evaporated into a vacuum —S. I. Anisimov and A. Kh. Rakhmatulina. 37(3), 441–4 (Sep. 1973); CPM-7406X1449
Hydrodynamic asymptotic form of the rotational–motion correlation function of a molecule in a liquid —I. Z. Fisher, A. V. Zatovskiĭ, and N. P. Malomuzh. 38(1), 146–50 (Jan. 1974); CPM-7405F0146

61.30.– Nonlocalized single-particle electronic states

61.30.H Band structure and Fermi surface of solid metals and alloys (including dHvA, magnetoacoustic, positron annihilation, and cyclotron resonance studies, etc.)

Low-temperature electrical conductivity of metals with closed Fermi surfaces —R. N. Gurzhi and A. I. Kopeliovich. 37(1), 195–200 (Jul. 1973); CPM-7401D0897
Superconductivity and electron structure of a solid solution of titanium in niobium —I. S. Shchetkin and T. N. Kharchenko. 37 (3), 491–3 (Sep. 1973); CPM-7406X1499
Allowance for correlation effects in narrow energy bands —N. A. Dmitriev, A. K. Zhitnik, and M. F. Sarry. 37(4), 710–2 (Oct. 1973); CPM-7407X1452
Shape of the electron Fermi surface of bismuth —V. S. Édel'man. 37(5), 875–80 (Nov. 1973); CPM-7410X0215
Possibility of propagation of dopplerons in metals with an open Fermi surface —É. A. Kaner and O. I. Lyubimov. 38(2), 386–91 (Feb. 1974); CPM-7405F0604
Investigation of the electronic mechanism of the isomorphic phase transition in cerium —V. A. Shaburov, I. M. Band, A. I. Grushko, T. B. Mezentseva, E. V. Petrovich, Yu. P. Smirnov, A. E. Sovestnov, O. I. Sumbaev, M. B. Trzhaskovskaya, and I. A. Markova. 38(3), 573–81 (Mar. 1974); CPM-7411X0953
Temperature dependence of the probability for scattering of charge carriers in molybdenum and tungsten —V. V. Boĭko, V. F. Gantmakher, and V. A. Gasparov. 38(3), 604–7 (Mar. 1974); CPM-7411X0984
Influence of magnetic field on excitonic transition —S. A. Gordyunin. 38(6), 1189–91 (Jun. 1974)
Effect of pressure on the Fermi surface of zinc —V. A. Venttsel', C. A. Voronov, A. I. Likhter, and A. V. Rudnev. 38(6), 1220–4 (Jun. 1974)

61.30.M Band structure of nonmetallic crystals

Phase transition in multivalley semiconductors in a magnetic field — V. A. Kochelap and V. N. Sokolov. 38(2), 408–12 (Feb. 1974); CPM-7405F0626
Effect of the multivalley structure of the conduction band on helical instability in the electron–hole plasma of silicon —V. M. Bondar, V. V. Vladimirov, N. I. Kononenko, O. G. Sarbeĭ, and A. I. Shchedrin. 38(3), 542–4 (Mar. 1974); CPM-7411X0922

61.50.– Level splitting and interactions

Influence of hydrostatic pressure on the splitting of the Landau levels in tellurium —V. B. Anzin, M. S. Bresler, E. S. Itskevich, Yu. V. Kosichkin, V. A. Sukhoparov, A. N. Tolmachev, and I. I. Farbshtein. 38(4), 755–8 (Apr. 1974); CPM-7502X0115

61.50.E Spin–orbit coupling, Zeeman, Stark, and strain splitting

Influence of the dynamic Jahn–Teller effect on the structure of quartet terms of the tetrahedrally coordinated ion Co^{2+}(ZnS—Co) —A. I. Ryskin, A. L. Natadze, and S. A. Kazanskiĭ. 37(3), 462–6 (Sep. 1973); CPM-7406X1470
Orbital momentum, Zeeman energy, and spin–orbit interaction in noncentral ions —A. B. Roĭtsin. 37(3), 504–5 (Sep. 1973); CPM-7406X1512
Theory of the interaction of atoms (muonium, positronium) with magnetized substances —V. G. Baryshevskiĭ and A. V. Ivashin. 38 (4), 730–2 (Apr. 1974); CPM-7502X0090

61.50.J Nuclear states and interactions

Mössbauer investigation of the relation between the electron structure and the diffusion properties of impurity atoms —B. S. Bokshtein and A. A. Zhukhovitskiĭ. 37(1), 88–9 (Jul. 1973); CPM-7401D0790

Orbital momentum, Zeeman energy, and spin–orbit interaction in noncentral ions —A. B. Roĭtsin. 37(3), 504–5 (Sep. 1973); CPM-7406X1512

Temperature effects in quadrupole interaction in NbHf alloys —V. A. Klyucharev, V. P. Bozhko, and A. S. Bulatov. 37(4), 678–80 (Oct. 1973); CPM-7407X1420

Investigation of the magnetic hyperfine interaction for impurity tin atoms in dilute Pd–Co solid solutions at low temperatures —N. E. Alekseevskiĭ and Yu. A. Samarskiĭ. 37(4), 681–5 (Oct. 1973); CPM-7407X1423

A possibility of employing the shadow effect for studying the decay of quasistationary states —N. V. Eremin, Yu. V. Melikov, and A. F. Tulinov. 38(3), 433–4 (Mar. 1974); CPM-7411X0813

Suppression of inelastic channels under hyperfine splitting conditions. Interference phenomena —A. M. Afanas'ev and I. P. Perstnev. 38 (3), 630–3 (Mar. 1974); CPM-7411X1010

61.50.M Other bulk localized states and interactions

Specific heat and spin paramagnetism of an electron gas in the presence of resonant scattering impurities —A. P. Kochkin. 37(1), 178–82 (Jul. 1973); CPM-7401D0880

Theory of the Kondo effect at low temperatures —L. M. Kovner. 38 (1), 151–5 (Jan. 1974); CPM-7405F0151

61.60.+ Metal–insulator transition

On the phase diagram of an excitonic insulator in a strong magnetic field —A. A. Abrikosov. 38(4), 750–4 (Apr. 1974); CPM-7502X0110

Influence of magnetic field on excitonic transition —S. A. Gordyunin. 38(6), 1189–91 (Jun. 1974)

61.70.– Impurity and defect levels; positron states

Influence of the dynamic Jahn–Teller effect on the structure of quartet terms of the tetrahedrally coordinated ion Co^{2+}(ZnS—Co) —A. I. Ryskin, A. L. Natadze, and S. A. Kazanskiĭ. 37(3), 462–6 (Sep. 1973); CPM-7406X1470

On the theory of impurity ferromagnetism in semiconductors —A. A. Abrikosov. 38(2), 403–7 (Feb. 1974); CPM-7405F0621

Effect of donor–donor and donor–acceptor interactions on the decay kinetics of the metastable state of Nd^{3+} in crystals —Yu. K. Voron'ko, T. G. Mamedov, V. V. Osiko, M. I. Timoshechkin, and I. A. Shcherbakov. 38(3), 565–72 (Mar. 1974); CPM-7411X0945

Dynamics of impurity spin in a dielectric —A. V. Lazuta and S. V. Maleev. 38(5), 1038–42 (May 1974)

Singularities of energy states of localized electrons in strongly compensated n–InSb —V. V. Arendarchuk, E. M. Gershenzon, L. B. Litvak–Gorskaya, and R. I. Rabinovich. 38(6), 1192–7 (Jun. 1974)

61.80.– Polarons, excitons, and other excitations

Submillimeter spectroscopy of semiconductors —E. M. Gershenzon, G. N. Gol'tsman, and N. G. Ptitsina. 37(2), 299–304 (Aug. 1973); CPM-7404E0553

Excitonic insulator in magnetic and electric fields —S. A. Brazovskiĭ. 37(2), 361–5 (Aug. 1973); CPM-7404E0615

Bose–Einstein condensation of dipole–active excitons and photons — S. A. Moskalenko, M. F. Miglei, M. I. Shmigluk, P. I. Khadzhi, and A. V. Lelyakov. 37(5), 902–8 (Nov. 1973); CPM-7410X0242

Optical orientation of excitons in uniaxial crystals. Large exchange splitting —G. L. Bir and G. E. Pikus. 37(6), 1116–21 (Dec. 1973); CPM-7412X0164

Exciton–magnon absorption of light in antiferromagnetic siderite —V. V. Eremenko, Yu. G. Litvinenko, A. A. Motornaya, V. I. Myatlik, and V. V. Shapiro. 38(3), 608–12 (Mar. 1974); CPM-7411X0988

Polarons in the strong coupling limit —V. I. Mel'nikov and G. E. Volovik. 38(4), 819–23 (Apr. 1974); CPM-7502X0179

Mobility of piezopolaron in the case of strong coupling —G. E. Volovik and V. M. Édel'shtein. 38(5), 972–6 (May 1974)

Theory of polarons in multivalley crystals. III. Arbitrary coupling force between the electron and the lattice polarization vibrations —S. I. Pekar, L. S. Khazan, and V. I. Sheka. 38(5), 999–1002 (May 1974)

Bound plasmon–phonon surface states on the interface between a semiconductor and a dielectric —L. M. Satarov. 38(6), 1139 (Jun. 1974)

On the efficiency of the exciton mechanism of superconductivity in films —Yu. A. Uspenskiĭ and G. F. Zharkov. 38(6), 1254–6 (Jun. 1974)

62. ELECTRONIC TRANSPORT IN CONDENSED MATTER

62.10.– Electronic conduction in metals and alloys

Contribution to the theory of superheat instability in semiconductors —A. A. Bulgakov, É. A. Kaner, S. I. Khankina, and V. M. Yakovenko. 37(1), 171–5 (Jul. 1973); CPM-7401D0873

Frequency dependence of the conductivity of one–dimensional systems —Yu. A. Bychkov. 38(1), 209–13 (Jan. 1974); CPM-7405F0209

62.10.E Electrical and thermal conduction in crystalline metals and alloys

Size effect of kinetic coefficients in polycrystalline bismuth films —V. M. Abrosimov, B. N. Egorov, and M. A. Krykin. 37(1), 113–6 (Jul. 1973); CPM-7401D0815

Low–temperature electrical conductivity of metals with closed Fermi surfaces —R. N. Gurzhi and A. I. Kopeliovich. 37(1), 195–200 (Jul. 1973); CPM-7401D0897

Resistivities of rubidium and potassium at helium temperatures —B. N. Aleksandrov, O. I. Lomonos, and E. D. Semenova. 37(2), 294–6 (Aug. 1973); CPM-7404E0548

Electron drag elastic field sources and the conductivity of metals —V. I. Al'shitz and V. L. Indenbom. 37(5), 914–7 (Nov. 1973); CPM-7410X0254

Electric conductivity of ferromagnets with a domain structure —Yu. V. Zakharov, Yu. I. Man'kov, and R. G. Khlebopros. 38(1), 119–22 (Jan. 1974); CPM-7405F0119

Electron–electron collisions and the electric conductivity of metals at low temperatures —A. I. Akhiezer, I. A. Akhiezer, and V. G. Bar'yakhtar. 38(1), 167–8 (Jan. 1974); CPM-7405F0167

Investigation of the kinetic coefficients of bismuth at helium temperatures —V. N. Kopylov and L. P. Mezhov–Deglin. 38(2), 357–64 (Feb. 1974); CPM-7405F0575

62.10.G Magnetoelectric and other magnetotransport effects

Localization of electrons in a magnetic field —B. I. Shklovskiĭ and A. L. Éfros. 37(6), 1122–7 (Dec. 1973); CPM-7412X0170

Magnetoresistance of filamentary cadmium single crystals at 4.2°K — Yu. P. Gaĭdukov and N. P. Danilova. 38(4), 767–71 (Apr. 1974); CPM-7502X0127

Anisotropy of Galvanomagnetic effects in single–crystal cobalt —E. N. Kondorskiĭ, O. S. Galkina, V. I. Ivanovskiĭ, A. V. Cheremushkina, and U. T. Usarov. 38(5), 977–8 (May 1974)

Quantum–kinetic equation and magnetoresistance of metals with allowance for magnetic breakdown —A. A. Slutskin. 38(5), 1057–66 (May 1974)

62.10.J Thermoelectric effects

Size effect of kinetic coefficients in polycrystalline bismuth films —V. M. Abrosimov, B. N. Egorov, and M. A. Krykin. 37(1), 113–6 (Jul. 1973); CPM-7401D0815

Investigation of the kinetic coefficients of bismuth at helium temperatures —V. N. Kopylov and L. P. Mezhov–Deglin. 38(2), 357–64 (Feb. 1974); CPM-7405F0575

62.10.Q Scattering mechanisms and Kondo effect

Scattering of electrons in bismuth —S. M. Cheremisin. 38(4), 779–82 (Apr. 1974); CPM-7502X0139

62.20.– Conductivity phenomena in semiconductors and insulators

62.20.D General theory, scattering mechanisms

Temperature dependence of the damping of helicons in indium —E. P. Vol'skiĭ and V. T. Petrashov. 37(1), 132–5 (Jul. 1973); CPM-7401D0834

Electron kinetics and stationary generation in semiconductor lasers — V. M. Galitskiĭ and V. F. Elesin. 37(2), 351–6 (Aug. 1973); CPM-7404E0605

Influence of electrically active impurities on the mobility of separate dislocations in germanium —I. E. Bondarenko, V. N. Erofeev, and V. I. Nikitenko. 37(6), 1109–15 (Dec. 1973); CPM-7412X0157

Effect of dislocations on the electric properties of p–germanium —Yu. A. Osip'yan and S. A. Shevchenko. 38(2), 345–8 (Feb. 1974); CPM-7405F0563

Temperature dependence of the probability for scattering of charge carriers in molybdenum and tungsten —V. V. Boĭko, V. F. Gantmakher, and V. A. Gasparov. 38(3), 604–7 (Mar. 1974); CPM-7411X0984

Theory of superconductivity in systems with an inverse distribution — V. F. Elesin, Yu. V. Kopaev, and R. Kh. Timerov. 38(6), 1170–6 (Jun. 1974)

62.20.H High field and nonlinear effects

Alternating oscillations in the photocurrent spectra of nonequuilibrium photoelectrons in p-type InSb subjected to quantizing magnetic fields —A. S. Aleksandrov, Yu. A. Bykovskiĭ, V. F. Elesin, E. A. Protasov, and A. G. Rodionov. 37(1), 120–6 (Jul. 1973); CPM-7401D0822

Magnetophonon oscillations of the conductivity of semiconductors with hot electrons —V. I. Ryzhiĭ. 37(2), 326–9 (Aug. 1973); CPM-7404E0580

Excitation of oscillations of charge carrier density in a tunnel junction —Yu. M. Ivanchenko and Yu. V. Medvedev. 37(3), 520–4 (Sep. 1973); CPM-7406X1528

62.20.K Minority carriers, recombination, and trapping

Effect of dislocations on the electric properties of p–germanium —Yu. A. Osip'yan and S. A. Shevchenko. 38(2), 345–8 (Feb. 1974); CPM-7405F0563

Effect of donor–donor and donor–acceptor interactions on the decay kinetics of the metastable state of Nd^{3+} in crystals —Yu. K. Voron'ko, T. G. Mamedov, V. V. Osiko, M. I. Timoshechkin, and I. A. Shcherbakov. 38(3), 565–72 (Mar. 1974); CPM-7411X0945

Singularities of energy states of localized electrons in strongly compensated n–InSb —V. V. Arendarchuk, E. M. Gershenzon, L. B. Litvak–Gorskaya, and R. I. Rabinovich. 38(6), 1192–7 (Jun. 1974)

62.20.M Galvanomagnetic and other magnetotransport effects

Alternating oscillations in the photocurrent spectra of nonequuilibrium photoelectrons in p-type InSb subjected to quantizing magnetic fields —A. S. Aleksandrov, Yu. A. Bykovskiĭ, V. F. Elesin, E. A. Protasov, and A. G. Rodionov. 37(1), 120–6 (Jul. 1973); CPM-7401D0822

Magnetophonon oscillations of the conductivity of semiconductors with hot electrons —V. I. Ryzhiĭ. 37(2), 326–9 (Aug. 1973); CPM-7404E0580

62.30.+ High-frequency effects

Temperature dependence of the damping of helicons in indium —E. P. Vol'skiĭ and V. T. Petrashov. 37(1), 132–5 (Jul. 1973); CPM-7401D0834

Magnetophonon oscillations of the conductivity of semiconductors with hot electrons —V. I. Ryzhiĭ. 37(2), 326–9 (Aug. 1973); CPM-7404E0580

Static surface resistance of zinc in a magnetic field —Yu. P. Gaĭdukov and N. P. Danilova. 37(3), 467–73 (Sep. 1973); CPM-7406X1475

Excitation of oscillations of charge carrier density in a tunnel junction —Yu. M. Ivanchenko and Yu. V. Medvedev. 37(3), 520–4 (Sep. 1973); CPM-7406X1528

Surface resistance of cadmium in a magnetic field —V. V. Lavrova, S. V. Medvedev, V. G. Skobov, L. M. Fisher, and V. A. Yudin. 37 (5), 929–36 (Nov. 1973); CPM-7410X0269

Instability of transverse electromagnetic waves in a drifting electron–hole plasma —O. G. Balev and I. I. Boĭko. 37(6), 1099–102 (Dec. 1973); CPM-7412X0147

High intensity circularly polarized waves in nonlinear dispersive media —K. A. Gorshkov, V. A. Kozlov, and L. A. Ostrovskiĭ. 38(1), 93–5 (Jan. 1974); CPM-7405F0093

The de Haas–van Alphen effect and damping of helicons during plastic deformation in aluminum —E. P. Vol'skiĭ, L. G. Levchenkova, and V. T. Petrashov. 38(1), 156–7 (Jan. 1974); CPM-7405F0156

Effect of spatial dispersion of carrier electric conductivity on the light– (radio–) electric effect in a strong magnetic field —L. É. Gurevich and V. S. Travnikov. 38(2), 335–8 (Feb. 1974); CPM-7405F0553

Surface resistance of a cadmium plate in a magnetic field —V. V. Lavrova, S. V. Medvedev, V. G. Skobov, L. M. Fisher, and V. A. Yudin. 38(2), 349–53 (Feb. 1974); CPM-7405F0567

Effect of the multivalley structure of the conduction band on helical instability in the electron–hole plasma of silicon —V. M. Bondar, V. V. Vladimirov, N. I. Kononenko, O. G. Sarbeĭ, and A. I. Shchedrin. 38(3), 542–4 (Mar. 1974); CPM-7411X0922

Paramagnetic relaxation due to plasma oscillations of the current carriers —M. F. Deigen, L. A. Suslin, and L. Yu. Mel'nikov. 38 (4), 824–6 (Apr. 1974); CPM-7502X0184

Singularities of energy states of localized electrons in strongly compensated n–InSb —V. V. Arendarchuk, E. M. Gershenzon, L. B. Litvak–Gorskaya, and R. I. Rabinovich. 38(6), 1192–7 (Jun. 1974)

62.40.+ Photoconduction and photovoltaic effects

Alternating oscillations in the photocurrent spectra of nonequuilibrium photoelectrons in p-type InSb subjected to quantizing magnetic fields —A. S. Aleksandrov, Yu. A. Bykovskiĭ, V. F. Elesin, E. A. Protasov, and A. G. Rodionov. 37(1), 120–6 (Jul. 1973); CPM-7401D0822

62.50.+ Acoustoelectric effects

Transport theory of the interaction of ultrasound with conduction electrons —P. E. Zil'berman and A. G. Mishin. 38(4), 733–7 (Apr. 1974); CPM-7502X0093

Electromagnetic excitation of sound in a metal located in a magnetic field parallel to the surface —V. L. Fal'ko. 38(6), 1184–8 (Jun. 1974)

62.60.+ Mixed conductivity and conductivity transitions

On the possibility of a metal–dielectric transition in one–dimensional systems with noninteger number of electrons per unit —A. A. Ovchinnikov. 37(1), 176–7 (Jul. 1973); CPM-7401D0878

Excitonic insulator in magnetic and electric fields —S. A. Brazovskiĭ. 37(2), 361–5 (Aug. 1973); CPM-7404E0615

Some problems in the theory of semimetals —A. A. Abrikosov. 38(5), 1031–7 (May 1974)

62.80.– Conductivity of specific semiconductors and insulators

Effect of dislocations on the electric properties of p–germanium —Yu. A. Osip'yan and S. A. Shevchenko. 38(2), 345–8 (Feb. 1974); CPM-7405F0563

Phase transition in multivalley semiconductors in a magnetic field — V. A. Kochelap and V. N. Sokolov. 38(2), 408–12 (Feb. 1974); CPM-7405F0626

62.90.+ Other topics in electronic transport in condensed matter

Reflection of conduction electrons from an atomically pure (110) face a of a tungsten crystal —P. P. Lutsishin, O. A. Panchenko, and A. A. Kharlamov. 37(6), 1083–5 (Dec. 1973); CPM-7412X0131

Investigation of the kinetic coefficients of bismuth at helium temperatures —V. N. Kopylov and L. P. Mezhov-Deglin. 38(2), 357–64 (Feb. 1974); CPM-7405F0575

63. ELECTRONIC STRUCTURE AND ELECTRICAL PROPERTIES OF SURFACES, INTERFACES, AND THIN FILMS

63.40.– Interfaces

Mechanism of emission of coherent phonons from a point junction — I. K. Yanson. 37(2), 338–40 (Aug. 1973); CPM-7404E0592
Excitation of oscillations of charge carrier density in a tunnel junction —Yu. M. Ivanchenko and Yu. V. Medvedev. 37(3), 520–4 (Sep. 1973); CPM-7406X1528
On the theory of the inelastic tunnel effect in normal metals —S. I. Shevchenko. 37(5), 897–901 (Nov. 1973); CPM-7410X0237
Phonon transition radiation —V. M. Levin, V. I. Pustovoĭt, and L. A. Chernozatonskiĭ. 37(5), 909–13 (Nov. 1973); CPM-7410X0249
Bound plasmon–phonon surface states on the interface between a semiconductor and a dielectric —L. M. Satarov. 38(6), 1139 (Jun. 1974)
Surface scattering in electron tunneling —A. V. Chaplik and M. V. Éntin. 38(6), 1251–3 (Jun. 1974)

63.60.– Thin films

Theory of field effect in metallic films —É. M. Baskin and M. V. Éntin. 37(2), 346–50 (Aug. 1973); CPM-7404E0600
Fluctuation shift of the transition temperature of thin superconducting films —Yu. N. Ovchinnikov. 37(2), 366–8 (Aug. 1973); CPM-7404E0620
On the effect of a dielectric coating on the critical temperature of superconducting films —Yu. A. Uspenskiĭ and G. F. Zharkov. 38 (4), 727–9 (Apr. 1974); CPM-7502X0087
Destruction of superconductivity in thin narrow films by a current — V. P. Andratskiĭ, L. M. Grundel', V. N. Gubankov, and N. B. Pavlov. 38(4), 794–8 (Apr. 1974); CPM-7502X0154
Electric conductivity and superconducting properties of thin mercury films —V. L. Tsymbalenko and A. I. Shal'nikov. 38(5), 1043–7 (May 1974)
Effect of laser radiation on superconductivity —R. A. Vardanyan and B. I. Ivlev. 38(6), 1156–61 (Jun. 1974)
Connection between the superconducting properties and the structure of "amorphous" low-temperature bismuth films —B. I. Belevtsev, Yu. F. Komnik, and L. A. Yatsuk. 38(6), 1225–30 (Jun. 1974)
On the efficiency of the exciton mechanism of superconductivity in films —Yu. A. Uspenskiĭ and G. F. Zharkov. 38(6), 1254–6 (Jun. 1974)

63.90.+ Other topics in electrical properties of surfaces, interfaces, and thin films

Size effect of kinetic coefficients in polycrystalline bismuth films —V. M. Abrosimov, B. N. Egorov, and M. A. Krykin. 37(1), 113–6 (Jul. 1973); CPM-7401D0815
The resistance of thin metallic samples —L. A. Fal'kovskiĭ. 37(5), 937–9 (Nov. 1973); CPM-7410X0277
Surface resistance of a cadmium plate in a magnetic field —V. V. Lavrova, S. V. Medvedev, V. G. Skobov, L. M. Fisher, and V. A. Yudin. 38(2), 349–53 (Feb. 1974); CPM-7405F0567
Stabilization of microdomain configurations in two-layer magnetic films —N. M. Salanskiĭ, V. A. Serëdkin, V. A. Burmakin, and A. V. Nabatov. 38(5), 1011–2 (May 1974)

64. SUPERCONDUCTIVITY

64.10.+ General theory

Longitudinal susceptibility and correlations in degenerate systems — A. Z. Patashinskiĭ and V. L. Pokrovskiĭ. 37(4), 733–6 (Oct. 1973); CPM-7407X1475
Stability of nonequilibrium Fermi distributions with respect to Cooper pairing —A. G. Aronov and V. L. Gurevich. 38(3), 550–6 (Mar. 1974); CPM-7411X0930
Contribution to the theory of the properties of the superconductors with β–W structure —L. P. Gor'kov. 38(4), 830–9 (Apr. 1974); CPM-7502X0190
Theory of superconductivity in the presence of electron–hole pairing in semimetals at T=0 —A. I. Rusinov, Chan Kat Do, and Yu. V. Kopaev. 38(5), 991–8 (May 1974)
Influence of proximity effect on the thermodynamic and magnetic properties of multilayer superconductors —V. P. Galaĭko and E. V. Bezuglyĭ. 38(5), 1013–7 (May 1974)
Collisionless relaxation of the energy gap in superconductors —A. F. Volkov and Sh. M. Kogan. 38(5), 1018–21 (May 1974)
Theory of superconductivity in systems with an inverse distribution — V. F. Elesin, Yu. V. Kopaev, and R. Kh. Timerov. 38(6), 1170–6 (Jun. 1974)

64.20.– Equilibrium properties

Some features of viscous flow of vortices in superconducting alloys near the critical temperature—L. P. Gor'kov and N. B. Kopnin. 37(1), 183–9 (Jul. 1973); CPM-7401D0885
Viscous flow of vortices in type–II superconducting alloys —L. P. Gor'kov and N. B. Kopnin. 38(1), 195–201 (Jan. 1974); CPM-7405F0195
On the effect of a dielectric coating on the critical temperature of superconducting films —Yu. A. Uspenskiĭ and G. F. Zharkov. 38 (4), 727–9 (Apr. 1974); CPM-7502X0087
A possible mechanism for the peak effect in hard superconductors — G. Kluge and V. Rudat. 38(4), 738–40 (Apr. 1974); CPM-7502X0098
Rate of penetration of a magnetic flux into type–II superconductors — B. V. Petukhov and V. R. Chechetkin. 38(4), 827–9 (Apr. 1974); CPM-7502X0187
Influence of proximity effect on the thermodynamic and magnetic properties of multilayer superconductors —V. P. Galaĭko and E. V. Bezuglyĭ. 38(5), 1013–7 (May 1974)
Connection between the superconducting properties and the structure of "amorphous" low–temperature bismuth films —B. I. Belevtsev, Yu. F. Komnik, and L. A. Yatsuk. 38(6), 1225–30 (Jun. 1974)

64.40.– Nonequilibrium and transport properties

Alteration of the superconducting properties of vanadium by introduction of tantalum impurity atoms —N. A. Chernoplekov, G. Kh. Panova, B. N. Samoilov, and A. A. Shikov. 37(1), 102–6 (Jul. 1973); CPM-7401D0804
Paramagnetic effect in type–I superconductors —L. L. Landau. 37(2), 285–9 (Aug. 1973); CPM-7404E0539
Fluctuation shift of the transition temperature of thin superconducting films —Yu. N. Ovchinnikov. 37(2), 366–8 (Aug. 1973); CPM-7404E0620
Magnetic flux pinning in a type–I superconductor in the intermediate state —L. M. Kano and V. A. Shukhman. 37(3), 452–7 (Sep. 1973); CPM-7406X1460
Radio–frequency size effect in a layer of normal metal bounded by its superconducting phase —I. P. Krylov and Yu. V. Sharvin. 37(3), 481–6 (Sep. 1973); CPM-7406X1489
Thermal conductivity and the temperature dependences of the energy gaps of nioium samples containing large amounts of impurity atoms —E. E. Anders, B. Ya. Sukharevskiĭ, and I. V. Volchok. 37 (5), 852–6 (Nov. 1973); CPM-7410X0192
Effect of high uniform pressure and residual stress on the superconductivity of alloys of the $V_3(Si_{1-x}Ge_x)$ system —A. G. Rabinkin, V. N. Galev, and V. N. Laukhin. 37(5), 870–4 (Nov. 1973); CPM-7410X0210
Fluctuation theory of the two–dimensional mixed state in type 1 superconductors —A. F. Andreev and W. Bestgen. 37(5), 942–9 (Nov. 1973); CPM-7410X0282
Magnetic properties of layered supreconductors with weak interaction between the layers —L. N. Bulaevskiĭ. 37(6), 1133–6 (Dec. 1973); CPM-7412X0181
Inhomogeneous state and the anisotropy of the upper critical field in layered superconductors with Josephson layer interaction —L. N. Bulaevskiĭ. 38(3), 634–9 (Mar. 1974); CPM-7411X1014

64.40.F Electromagnetic absorption

Paramagnetic effect in type-I superconductors —I. L. Landau. 37(2), 285–9 (Aug. 1973); CPM-7404E0539

Resistance of superconductors near the critical field strength H_{c2} —A. I. Larkin and Yu. N. Ovchinnikov. 37(3), 557–60 (Sep. 1973); CPM-7406X1565

Deviations from the Matthiessen rule in the temperature range 2 to 14°K in Sn, In, Hg, and Ti containing small quantities of impurities —O. I. Lomonos and B. N. Aleksandrov. 37(6), 1137–40 (Dec. 1973); CPM-7412X0185

High-temperature resistivity and the superconductivity of potassium and rubidium at high pressures —G. M. Gandelman, O. Yu. Itskovich, P. S. Kondratenko, I. P. Perstnev, and V. M. Finkelberg. 38(1), 111–5 (Jan. 1974); CPM-7405F0111

Conductivity of type-II superconductors near the transition temperature —Yu. N. Ovchinnikov. 38(1), 143–5 (Jan. 1974); CPM-7405F0143

On the theory of Raman scattering of light in superconductors —A. A. Abrikosov and V. M. Genkin. 38(2), 417–9 (Feb. 1974); CPM-7405F0635

Effect of laser radiation on superconductivity —R. A. Vardanyan and B. I. Ivlev. 38(6), 1156–61 (Jun. 1974)

64.40.K Thermal conductivity

Nonlinear acoustic effects in superconductors —Yu. M. Gal'perin, V. L. Gurevich, and V. I. Kozub. 38(3), 517–24 (Mar. 1974); CPM-7411X0897

64.40.P Critical currents and flux pinning ac behavior

Some features of viscous flow of vortices in superconducting alloys near the critical temperature vortices in superconducting alloys near the critical temperature —L. P. Gor'kov and N. B. Kopnin. 37(1), 183–9 (Jul. 1973); CPM-7401D0885

Superconductivity and electron structure of a solid solution of titanium in niobium —I. S. Shchetkin and T. N. Kharchenko. 37 (3), 491–3 (Sep. 1973); CPM-7406X1499

Resistance of superconductors near the critical field strength H_{c2} —A. I. Larkin and Yu. N. Ovchinnikov. 37(3), 557–60 (Sep. 1973); CPM-7406X1565

Thermal conductivity and the temperature dependences of the energy gaps of niobium samples containing large amounts of impurity atoms —E. E. Anders, B. Ya. Sukharevskiĭ, and I. V. Volchok. 37 (5), 852–6 (Nov. 1973); CPM-7410X0192

High frequency current states in small size superconductors —V. P. Galaiko. 37(5), 922–8 (Nov. 1973); CPM-7410X0262

Effect of high hydrostatic pressure and residual strain on the superconductivity of Nb–Al–Ge alloys with an A15-type structure —V. N. Galev and A. G. Rabin'kin. 38(3), 525–32 (Mar. 1974); CPM-7411X0905

Effect of the low-frequency peaks of the phonon state density on the critical temperature of superconductors —M. V. Medvedev, É. A. Pashitskiĭ, and Yu. S. Pyatiletov. 38(3), 587–92 (Mar. 1974); CPM-7411X0967

Surface and volume vortex pinning in type-II superconductors —N. Ya. Fogel'. 38(4), 763–6 (Apr. 1974); CPM-7502X0123

Destruction of superconductivity in thin narrow films by a current —V. P. Andratskiĭ, L. M. Grundel', V. N. Gubankov, and N. B. Pavlov. 38(4), 794–8 (Apr. 1974); CPM-7502X0154

Electrodynamics of inhomogeneous type-II superconductors —A. I. Larkin and Yu. N. Ovchinnikov. 38(4), 854–8 (Apr. 1974); CPM-7502X0214

64.60.+ Tunneling and coupled superconductors

On tunneling of electron pairs in a sound field in superconductors —G. I. Urushadze. 37(5), 950–2 (Nov. 1973); CPM-7410X0290

Inhomogeneous state and the anisotropy of the upper critical field in layered superconductors with Josephson layer interaction —L. N. Bulaevskiĭ. 38(3), 634–9 (Mar. 1974); CPM-7411X1014

64.70.– Superconducting materials

Fluctuation theory of the two-dimensional mixed state in type 1 superconductors —A. F. Andreev and W. Bestgen. 37(5), 942–9 (Nov. 1973); CPM-7410X0282

Conductivity of type-II superconductors near the transition temperature —Yu. N. Ovchinnikov. 38(1), 143–5 (Jan. 1974); CPM-7405F0143

Viscous flow of vortices in type-II superconducting alloys —L. P. Gor'kov and N. B. Kopnin. 38(1), 195–201 (Jan. 1974); CPM-7405F0195

Surface and volume vortex pinning in type-II superconductors —N. Ya. Fogel'. 38(4), 763–6 (Apr. 1974); CPM-7502X0123

Rate of penetration of a magnetic flux into type-II superconductors — B. V. Petukhov and V. R. Chechetkin. 38(4), 827–9 (Apr. 1974); CPM-7502X0187

Electrodynamics of inhomogeneous type-II superconductors —A. I. Larkin and Yu. N. Ovchinnikov. 38(4), 854–8 (Apr. 1974); CPM-7502X0214

Effect of surface and volume defects on the dissipative processes in type-II superconductors —Dzh. G. Chigvinadze. 38(5), 960–2 (May 1974)

Influence of proximity effect on the thermodynamic and magnetic properties of multilayer superconductors —V. P. Galaiko and E. V. Bezuglyĭ. 38(5), 1013–7 (May 1974)

Paramagnetic effect of the surface "mixed" state in type-I superconductors —W. Bestgen. 38(5), 1048–51 (May 1974)

64.90.+ Other topics in superconductivity

Temperature effects in quadrupole interaction in NbHf alloys —V. A. Klyucharev, V. P. Bozhko, and A. S. Bulatov. 37(4), 678–80 (Oct. 1973); CPM-7407X1420

Effect of surface and volume defects on the dissipative processes in type-II superconductors —Dzh. G. Chigvinadze. 38(5), 960–2 (May 1974)

Surface-charge oscillations in superconductors —I. O. Kulik. 38(5), 1008–10 (May 1974)

Electric conductivity and superconducting properties of thin mercury films —V. L. Tsymbalenko and A. I. Shal'nikov. 38(5), 1043–7 (May 1974)

Paramagnetic effect of the surface "mixed" state in type-I superconductors —W. Bestgen. 38(5), 1048–51 (May 1974)

65. MAGNETIC PROPERTIES AND MATERIALS

65.10.– General theory and models of magnetic ordering

Spin waves in an Heisenberg ferromagnetic substance with single-ion anisotropy —M. P. Kashchenko, N. F. Balakhonov, and L. V. Kurbatov. 37(1), 201–4 (Jul. 1973); CPM-7401D0903

Expansion of the equation of state in the $(4-\epsilon)$ -dimensional Heisenberg model —G. M. Avdeeva. 37(2), 377–82 (Aug. 1973); CPM-7404E0631

Exact inequalities and their consequences in the theory of amorphous magnets —K. Handrich. 37(4), 703–9 (Oct. 1973); CPM-7407X1445

Multipoint energy density correlators for the two-dimensional Ising model —E. A. Shapoval. 38(2), 378–82 (Feb. 1974); CPM-7405F0596

Kinetics of conduction electrons in multidomain ferromagnetic structures —R. I. Shekhter and A. S. Rozhavskiĭ. 38(2), 383–5 (Feb. 1974); CPM-7405F0601

Diffusion of magnetization in a Heisenberg ferromagnet above the Curie point —S. V. Maleev. 38(3), 613–9 (Mar. 1974); CPM-7411X0993

Magnetic properties of plane and layer systems —V. L. Pokrovskiĭ and G. V. Uĭmin. 38(4), 847–53 (Apr. 1974); CPM-7502X0207

Paramagnetic resonance of mixed chromium and iron triads —Yu. V. Yablokov, V. A. Gaponenko, M. V. Eremin, V. V. Zelentsov, and T. A. Zhemchuzhnikova. 38(5), 988–90 (May 1974)

65.20.– Diamagnetism and paramagnetism

Influence of a magnetic field on the crystal structure of dysprosium, III —V. A. Finkel' and V. S. Belovol. 37(1), 90–3 (Jul. 1973); CPM-7401D0792

Specific heat and spin paramagnetism of an electron gas in the presence of resonant scattering impurities —A. P. Kochkin. 37(1), 178–82 (Jul. 1973); CPM-7401D0880

Susceptibility of copper–nickel alloys —V. E. Rode, A. Bluschke, B. N. Krainov, and A. I. Leichenko. 37(2), 280–2 (Aug. 1973); CPM-7404E0534

Magnetic anisotropy of the uranium compounds UAsS and UAsSe — K. P. Belov, A. S. Dmitrievskiĭ, A. Zygmunt, R. Z. Levitin, and V. Trzebiatowski. 37(2), 297–8 (Aug. 1973); CPM-7404E0551

Photothermomagnetic effect in a semimetal upon excitation of weakly damped waves —Sh. M. Kogan. 37(3), 544–5 (Sep. 1973); CPM-7406X1552

Investigation of magnetic properties of monocrystals of the uranium compounds U_3P_4 and U_3As_4 in strong fields —K. P. Belov, Z. Genke, A. S. Dmitrievskiĭ, R. Z. Levitin, and W. Trzebiatowski. 37 (4), 686–8 (Oct. 1973); CPM-7407X1428

Investigation of the superparamagnetic properties of ultrafine iron particles by Mössbauer spectroscopy —A. P. Amulyavichus and I. P. Suzdalev. 37(5), 859–63 (Nov. 1973); CPM-7410X0199

Magnetocaloric effect in a superparamagnet —V. M. Belova, V. I. Nikolaev, and V. M. Stuchebnikov. 37(5), 881–2 (Nov. 1973); CPM-7410X0221

Theory of the Kondo effect at low temperatures —L. M. Kovner. 38 (1), 151–5 (Jan. 1974); CPM-7405F0151

The de Haas–van Alphen effect and damping of helicons during plastic deformation in aluminum —E. P. Vol'skiĭ, L. G. Levchenkova, and V. T. Petrashov. 38(1), 156–7 (Jan. 1974); CPM-7405F0156

65.30.– Magnetically ordered materials, intrinsic properties

Nuclear spin motion with allowance for Suhl–Nakamura interaction — E. A. Turov, M. I. Kurkin, and V. V. Nikolaev. 37(1), 147–53 (Jul. 1973); CPM-7401D0849

65.30.C Saturation moments and magnetic susceptibility

Influence of a magnetic field on the crystal structure of dypsprosium, III —V. A. Finkel' and V. S. Belovol. 37(1), 90–3 (Jul. 1973); CPM-7401D0792

Thermodynamics of layered isotropic magnets at low temperatures — V. L. Berezinskiĭ and A. Ya. Blank. 37(2), 369–76 (Aug. 1973); CPM-7404E0623

Theory of magnetization self–oscillations on parametric excitation of spin waves —V. S. L'vov, S. L. Musher, and S. S. Starobinets. 37 (3), 546–51 (Sep. 1973); CPM-7406X1554

Investigation of the magnetic hyperfine interaction for impurity tin atoms in dilute Pd–Co solid solutions at low temperatures —N. E. Alekseevskiĭ and Yu. A. Samarskiĭ. 37(4), 681–5 (Oct. 1973); CPM-7407X1423

The weak ferromagnetism of NiF_2 —A. S. Borovik–Romanov, A. N. Bazhan, and N. M. Kreines. 37(4), 695–702 (Oct. 1973); CPM-7407X1437

Magnetic properties of compounds of rare–earth metals with iron, of the type RF_3 —K. P. Belov, S. A. Nikitin, A. M. Bisliev, E. M. Savitskiĭ, V. F. Terekhova, and V. E. Kolesnichenko. 37(6), 1086–8 (Dec. 1973); CPM-7412X0134

Investigation of the disordered state of two–dimensional ferromagnetic substances —Yu. S. Karimov. 38(1), 129–33 (Jan. 1974); CPM-7405F0129

Polarization–optical investigation of magnetization processes near dislocations in yttrium iron garnet single crystals —V. K. Vlasko–Vlasov, L. M. Dedukh, and V. I. Nikitenko. 38(1), 184–94 (Jan. 1974); CPM-7405F0184

Magnetrooptical investigation of the magnetization compensation point in gadolinium iron garnets —O. A. Grzhegorzhevskiĭ and R. V. Pisarev. 38(2), 312–6 (Feb. 1974); CPM-7405F0530

Scaling relation for phase transitions in a one–dimensional x–y model —V. I. Ponomarev, V. M. Kontorovich, and V. M. Tsukernik. 38 (3), 600–3 (Mar. 1974); CPM-7411X0980

Susceptibility of the ferrite spin system above the parametric excitation threshold —Ya. A. Monosov, V. V. Surin, and V. A. Shakhunov. 38(5), 951–3 (May 1974)

Magnetic susceptibility and weak ferromagnetism of NiF_2 at T=4.2°K —A. N. Bazhan. 38(6), 1238–41 (Jun. 1974)

65.30.E Exchange and superexchange interactions

Crystal structure and magnetic properties of substances with orbital degeneracy —K. I. Kugel' and D. I. Khomskiĭ. 37(4), 725–30 (Oct. 1973); CPM-7407X1467

Specific heat of the antiferromagnetic garnet $Ca_3Mn_2Ge_3O_{12}$ —K. P. Belov, T. V. Valyanskaya, L. G. Mamsurova, and V. I. Sokolov. 38 (3), 561–4 (Mar. 1974); CPM-7411X0941

Theory of the interaction of atoms (muonium, positronium) with magnetized substances —V. G. Baryshevskiĭ and A. V. Ivashin. 38 (4), 730–2 (Apr. 1974); CPM-7502X0090

Quantum quadrupolar magnetism and phase transitions in the presence of biquadratic exchange —V. M. Matveev. 38(4), 813–8 (Apr. 1974); CPM-7502X0173

Paramagnetic resonance of mixed chromium and iron triads —Yu. V. Yablokov, V. A. Gaponenko, M. V. Eremin, V. V. Zelentsov, and T. A. Zhemchuzhnikova. 38(5), 988–90 (May 1974)

65.30.G Magnetic impurity interactions

Effect of oscillating interaction between magnetic impurities on the properties of dilute magnetic alloys —I. Ya. Korenblit and E. F. Shender. 37(1), 159–63 (Jul. 1973); CPM-7401D0861

On the theory of impurity ferromagnetism in semiconductors —A. A. Abrikosov. 38(2), 403–7 (Feb. 1974); CPM-7405F0621

65.30.J Critical point effects, specific heats, short–range order, and magnetic transitions, general

Scaling relation for phase transitions in a one–dimensional x–y model —V. I. Ponomarev, V. M. Kontorovich, and V. M. Tsukernik. 38 (3), 600–3 (Mar. 1974); CPM-7411X0980

Effect of long–range forces on the phase transition in the two–dimensional model of an antiferromagnetic substance —V. S. Esipov. 38(4), 759–62 (Apr. 1974); CPM-7502X0119

Critical singularities of the propagation of ultrasonic waves in yttrium iron garnet near the Curie point —I. K. Kamilov and Kh. K. Aliev. 38(5), 954–6 (May 1974)

65.30.L Ferromagnetic–paramagnetic transitions

Magnetocaloric effect in a superparamagnet —V. M. Belova, V. I. Nikolaev, and V. M. Stuchebnikov. 37(5), 881–2 (Nov. 1973); CPM-7410X0221

Quantum quadrupolar magnetism and phase transitions in the presence of biquadratic exchange —V. M. Matveev. 38(4), 813–8 (Apr. 1974); CPM-7502X0173

Magnetic properties of ultrafine iron oxide particles —Yu. F. Krupyanskiĭ and I. P. Suzdalev. 38(4), 859–64 (Apr. 1974); CPM-7502X0219

Critical singularities of the propagation of ultrasonic waves in yttrium iron garnet near the Curie point —I. K. Kamilov and Kh. K. Aliev. 38(5), 954–6 (May 1974)

65.30.N Ferromagnetic–antiferromagnetic transitions

Effect of pressure on magnetic transformations in an iron–rhodium alloy —G. T. Dubovka. 38(6), 1140–3 (Jun. 1974)

65.30.Q Paramagnetic–antiferromagnetic transitions

Magnetic birefringence and the domain structure of antiferromagnetic cobalt carbonate —N. F. Kharchenko, V. V. Eremenko, and O. P. Tutakina. 37(4), 672–7 (Oct. 1973); CPM-7407X1414

Pair production by a periodic electric field —N. B. Narozhnyĭ and A. I. Nikishov. 38(3), 427–32 (Mar. 1974); CPM-7411X0807

Specific heat of the antiferromagnetic garnet $Ca_3Mn_2Ge_3O_{12}$ —K. P. Belov, T. V. Valyanskaya, L. G. Mamsurova, and V. I. Sokolov. 38 (3), 561–4 (Mar. 1974); CPM-7411X0941

65.40.– Spin arrangements (neutron studies, etc.)

65.40.D Spin waves

Spin waves in an Heisenberg ferromagnetic substance with single–ion anisotropy —M. P. Kashchenko, N. F. Balakhonov, and L. V. Kurbatov. 37(1), 201–4 (Jul. 1973); CPM-7401D0903

Theory of magnetization self–oscillations on parametric excitation of spin waves —V. S. L'vov, S. L. Musher, and S. S. Starobinets. 37 (3), 546–51 (Sep. 1973); CPM-7406X1554

Spin waves and density of states in disordered ferromagnetic substances —S. L. Ginzburg, I. Ya. Korenblit, and E. F. Shender. 37(6), 1141–7 (Dec. 1973); CPM-7412X0189

Investigation of the disordered state of two-dimensional ferromagnetic substances —Yu. S. Karimov. 38(1), 129–33 (Jan. 1974); CPM-7405F0129

Damping of spin waves in antiferromagnetic substances with magnetic anisotropy of the "easy plane" type —V. G. Bar'yakhtar, V. L. Sobolev, and A. G. Kvirikadze. 38(2), 392–8 (Feb. 1974); CPM-7405F0610

Exciton–magnon absorption of light in antiferromagnetic siderite —V. V. Eremenko, Yu. G. Litvinenko, A. A. Motornaya, V. I. Myatlik, and V. V. Shapiro. 38(3), 608–12 (Mar. 1974); CPM-7411X0988

65.40.F Anisotropy

Spin waves in an Heisenberg ferromagnetic substance with single-ion anisotropy —M. P. Kashchenko, N. F. Balakhonov, and L. V. Kurbatov. 37(1), 201–4 (Jul. 1973); CPM-7401D0903

Magnetic anisotropy of the uranium compounds UAsS and UAsSe — K. P. Belov, A. S. Dmitrievskiĭ, A. Zygmunt, R. Z. Levitin, and V. Trzebiatowski. 37(2), 297–8 (Aug. 1973); CPM-7404E0551

Magnetic anisotropy of rare earth alloys —V. P. Karpenko and Yu. P. Irkhin. 37(2), 383–5 (Aug. 1973); CPM-7404E0637

Magnetic anisotropy and magnetostriction of neodymium–substituted yttrium iron garnets —N. V. Volkova and V. I. Raĭtsis. 38(2), 339–41 (Feb. 1974); CPM-7405F0557

Damping of spin waves in antiferromagnetic substances with magnetic anisotropy of the "easy plane" type —V. G. Bar'yakhtar, V. L. Sobolev, and A. G. Kvirikadze. 38(2), 392–8 (Feb. 1974); CPM-7405F0610

Effect of magnetic breakdown on the Hall effect in beryllium —N. E. Alekseevskiĭ and V. I. Nizhankovskiĭ. 38(3), 533–7 (Mar. 1974); CPM-7411X0913

On the nature of the magnetization discontinuity in MnBi —E. V. Shtol'ts and N. G. Kaunov. 38(4), 723–6 (Apr. 1974); CPM-7502X0083

The phase method for the Dirac equation and the calculation of the critical nuclear charge —M. S. Marinov and V. S. Popov. 38(6), 1069–75 (Jun. 1974)

Magnetic-field-induced interaction of collective excitations in a weak ferromagnet with single-ion anisotropy —V. N. Kitaev, M. P. Kaschenko, and L. V. Kurbatov. 38(6), 1166–9 (Jun. 1974)

65.50.– Studies of specific magnetic materials

Crystal structure and magnetic properties of substances with orbital degeneracy —K. I. Kugel' and D. I. Khomskiĭ. 37(4), 725–30 (Oct. 1973); CPM-7407X1467

Magnetic structure and localization of Co^{2+} and Fe^{2+} ions in hexagonal ferrites —V. F. Belov, T. A. Khimich, M. N. Shipko, I. S. Zheludev, E. V. Korneev, and N. S. Ovanesyan. 37(6), 1089–95 (Dec. 1973); CPM-7412X0137

Spin wave relaxation in antiferromagnetic $CsMnF_3$ —B. Ya. Kotyuzhanskiĭ and L. A. Prozorova. 38(6), 1233–7 (Jun. 1974)

Magnetic susceptibility and weak ferromagnetism of NiF_2 at T=4.2°K —A. N. Bazhan. 38(6), 1238–41 (Jun. 1974)

65.60.– Domain effects, magnetization curves, and hysteresis

Magnetic birefringence and the domain structure of antiferromagnetic cobalt carbonate —N. F. Kharchenko, V. V. Eremenko, and O. P. Tutakina. 37(4), 672–7 (Oct. 1973); CPM-7407X1414

Polarization-optical investigation of magnetization processes near dislocations in yttrium iron garnet single crystals —V. K. Vlasko-Vlasov, L. M. Dedukh, and V. I. Nikitenko. 38(1), 184–94 (Jan. 1974); CPM-7405F0184

Kinetics of conduction electrons in multidomain ferromagnetic structures —R. I. Shekhter and A. S. Rozhavskiĭ. 38(2), 383–5 (Feb. 1974); CPM-7405F0601

On the nature of the magnetization discontinuity in MnBi —E. V. Shtol'ts and N. G. Kaunov. 38(4), 723–6 (Apr. 1974); CPM-7502X0083

Magnetic properties of ultrafine iron oxide particles —Yu. F. Krupyanskiĭ and I. P. Suzdalev. 38(4), 859–64 (Apr. 1974); CPM-7502X0219

Effect of magnetic field on the crystal structure of terbium —V. A. Finkel' and V. S. Belovol. 38(5), 963–7 (May 1974)

Stabilization of microdomain configurations in two-layer magnetic films —N. M. Salanskiĭ, V. A. Serëdkin, V. A. Burmakin, and A. V. Nabatov. 38(5), 1011–2 (May 1974)

Magnetic structure of copper–manganese alloys with exchange anisotropy —E. I. Kondorskiĭ, O. S. Galkina, and A. Dzhurakulov. 38(6), 1153–5 (Jun. 1974)

65.70.+ Thin films

Size effects in the magnetic susceptibility of metals —S. S. Nedorezov. 37(2), 317–21 (Aug. 1973); CPM-7404E0571

Surface resistance of cadmium in a magnetic field —V. V. Lavrova, S. V. Medvedev, V. G. Skobov, L. M. Fisher, and V. A. Yudin. 37 (5), 929–36 (Nov. 1973); CPM-7410X0269

On the kinetics of magnetization of suspensions of ferromagnetic particles —M. A. Martsenyuk, Yu. L. Raĭkher, and M. I. Shliomis. 38(2), 413–6 (Feb. 1974); CPM-7405F0631

65.80.+ Magnetomechanical effects and magnetostriction (including magnetoacoustic effects)

Influence of a magnetic field on the crystal structure of dypsprosium, III —V. A. Finkel' and V. S. Belovol. 37(1), 90–3 (Jul. 1973); CPM-7401D0792

Electromagnetic excitation of sound in alkali metals located in a magnetic field —É. A. Kaner and V. L. Fal'ko. 37(3), 516–20 (Sep. 1973); CPM-7406X1524

Peculiarities in the amplification of ultrasound in n–InSb in strong magnetic fields —S. N. Ivanov and G. D. Mansfel'd. 37(6), 1096–8 (Dec. 1973); CPM-7412X0144

Antiferromagnetic resonance investigation of the magnetoelastic interaction in hematite —P. P. Maksimenkov and V. I. Ozhogin. 38(2), 324–8 (Feb. 1974); CPM-7405F0542

Magnetic anisotropy and magnetostriction of neodymium–substituted yttrium iron garnets —N. V. Volkova and V. I. Raĭtsis. 38(2), 339–41 (Feb. 1974); CPM-7405F0557

Study of phase transitions in KD_2PO_4 single crystals by the acoustic magnetic resonance technique —Kh. G. Bogdanova, Yu. V. Vladimirtsev, V. A. Golenishchev-Kutuzov, and U. Kh. Kopvillem. 38(3), 505–8 (Mar. 1974); CPM-7411X0885

Antiferromagnetic resonance in layered $CoCl_2$ and $NiCl_2$ crystals —A. F. Lozenko and S. M. Ryabchenko. 38(3), 538–41 (Mar. 1974); CPM-7411X0918

Propagation of surface acoustic waves in metals in a magnetic field — A. M. Grishin and Yu. V. Tarasov. 38(4), 783–8 (Apr. 1974); CPM-7502X0143

Wave excitation by light and by a homogeneous alternating magnetic field —A. S. Bakaĭ and G. G. Sergeeva. 38(4), 840–6 (Apr. 1974); CPM-7502X0200

Effect of magnetic field on the crystal structure of terbium —V. A. Finkel' and V. S. Belovol. 38(5), 963–7 (May 1974)

Dispersion of sound velocity and the electron relaxation time in bismuth and antimony —A. P. Korolyuk, M. A. Obolenskiĭ, and V. I. Beletskiĭ. 38(5), 979–82 (May 1974)

Electromagnetic excitation of sound in a metal located in a magnetic field parallel to the surface —V. L. Fal'ko. 38(6), 1184–8 (Jun. 1974)

Self-action of a hypersonic wave in acoustic paramegnetic resonance —E. M. Ganapol'skiĭ. 38(6), 1209–14 (Jun. 1974)

65.90.+ Other topics in magnetic properties and materials

Magnetocaloric effect in compounds of rare-earth metals with iron — S. A. Nikitin, E. V. Talalaeva, L. A. Chernikova, and A. S. Andreenko. 38(5), 1028–30 (May 1974)

66. MAGNETIC RESONANCE AND RELAXATION IN CONDENSED MATTER; MOSSBAUER EFFECT

66.20.+ General theory of resonances and relaxation

Optical orientation in a system of electrons and lattice nuclei in semiconductors. Experiment —V. L. Berkovits, A. I. Ekimov, and V. I. Safarov. 38(1), 169–76 (Jan. 1974); CPM-7405F0169

Optical orientation in a system of electrons and lattice nuclei in semiconductors. Theory —M. I. D'yakonov and V. I. Perel'. 38(1), 177–83 (Jan. 1974); CPM-7405F0177

Diffusion of magnetization in a Heisenberg ferromagnet above the Curie point —S. V. Maleev. 38(3), 613–9 (Mar. 1974); CPM-7411X0993

Exact theory of relaxation of two-level systems in a strong nonmonochromatic field —A. E. Kaplan. 38(4), 705–11 (Apr. 1974); CPM-7502X0065

66.30.– Electron spin resonance and relaxation

Specific heat and spin paramagnetism of an electron gas in the presence of resonant scattering impurities —A. P. Kochkin. 37(1), 178–82 (Jul. 1973); CPM-7401D0880

Low-frequency paramagnetic susceptibility under conditions of shift of the spin–spin temperature —V. A. Atsarkin. 37(3), 552–6 (Sep. 1973); CPM-7406X1560

Conduction electron spin echo in metals —V. A. Zhikharev, A. R. Kessel', É. G. Kharakhash'yan, F. G. Cherkasov, and K. K. Shvarts. 37(4), 689–94 (Oct. 1973); CPM-7407X1431

Paramagnetic relaxation due to plasma oscillations of the current carriers —M. F. Deĭgen, L. A. Suslin, and L. Yu. Mel'nikov. 38 (4), 824–6 (Apr. 1974); CPM-7502X0184

Paramagnetic resonance of mixed chromium and iron triads —Yu. V. Yablokov, V. A. Gaponenko, M. V. Eremin, V. V. Zelentsov, and T. A. Zhemchuzhnikova. 38(5), 988–90 (May 1974)

Dynamics of impurity spin in a dielectric —A. V. Lazuta and S. V. Maleev. 38(5), 1038–42 (May 1974)

66.40.+ Diamagnetic resonance

Scattering of an electron in an electromagnetic wave and in a homogeneous magnetic field —D. I. Abakarov and V. P. Oleĭnik. 37(5), 784–6 (Nov. 1973); CPM-7410X0124

Possibility of propagation of dopplerons in metals with an open Fermi surface —É. A. Kaner and O. I. Lyubimov. 38(2), 386–91 (Feb. 1974); CPM-7405F0604

66.50.+ Ferromagnetic, antiferromagnetic, and ferrimagnetic resonances; spin–wave resonance

Spin waves and density of states in disordered ferromagnetic substances —S. L. Ginzburg, I. Ya. Korenblit, and E. F. Shender. 37(6), 1141–7 (Dec. 1973); CPM-7412X0189

Antiferromagnetic resonance investigation of the magnetoelastic interaction in hematite —P. P. Maksimenkov and V. I. Ozhogin. 38(2), 324–8 (Feb. 1974); CPM-7405F0542

Antiferromagnetic resonance in layered $CoCl_2$ and $NiCl_2$ crystals —A. F. Lozenko and S. M. Ryabchenko. 38(3), 538–41 (Mar. 1974); CPM-7411X0918

Investigation of the $BaMnF_4$ phase diagram by the antiferromagnetic resonance technique —A. V. Tishchenko, B. I. Al'shin, and D. N. Astrov. 38(4), 789–93 (Apr. 1974); CPM-7502X0149

Spin wave relaxation in antiferromagnetic $CsMnF_3$ —B. Ya. Kotyuzhanskiĭ and L. A. Prozorova. 38(6), 1233–7 (Jun. 1974)

66.60.– Nuclear magnetic resonance and relaxation

Nuclear spin motion with allowance for Suhl–Nakamura interaction — E. A. Turov, M. I. Kurkin, and V. V. Nikolaev. 37(1), 147–53 (Jul. 1973); CPM-7401D0849

Spin diffusion in solid He^3-He^4 solutions —V. N. Grigor'ev, B. N. Esel'son, and V. A. Mikheev. 37(2), 309–10 (Aug. 1973); CPM-7404E0563

Nuclear relaxation in SrF_2 —F. L. Aukhadeev, I. I. Valeev, and V. A. Skrebnev. 37(5), 857–8 (Nov. 1973); CPM-7410X0197

Optical orientation in a system of electrons and lattice nuclei in semiconductors. Experiment —V. L. Berkovits, A. I. Ekimov, and V. I. Safarov. 38(1), 169–76 (Jan. 1974); CPM-7405F0169

NMR investigation of $Gd_xY_{1-x}Fe_2$ compounds —V. A. Vasil'kovskiĭ, N. M. Kovtun, A. K. Kuprianov, S. A. Nikitin, and V. F. Ostrovskiĭ. 38(2), 342–4 (Feb. 1974); CPM-7405F0560

Study of phase transitions in KD_2PO_4 single crystals by the acoustic magnetic resonance technique —Kh. G. Bogdanova, Yu. V. Vladimirtsev, V. A. Golenishchev-Kutuzov, and U. Kh. Kopvillem. 38(3), 505–8 (Mar. 1974); CPM-7411X0885

Proton relaxation in dilute rare-earth ethyl sulfates —I. I. Valeev, V. A. Skrebnev, and F. L. Aukhadeev. 38(3), 593–6 (Mar. 1974); CPM-7411X0973

Effect of collective motions in a fluid on the microscopic magnetic spin parameters —E. M. Iolin. 38(4), 741–4 (Apr. 1974); CPM-7502X0101

Spin diffusion in nuclear quadrupole resonance —I. L. Bukhbinder and A. R. Kessel'. 38(4), 745–9 (Apr. 1974); CPM-7502X0105

Nuclear magnetic resonance of V^{51} in a V_3Si single crystal —B. N. Tret'yakov, V. A. Marchenko, V. B. Kuritsin, and B..N. Kodess. 38 (4), 772–4 (Apr. 1974); CPM-7502X0132

66.70.– Magnetic double resonance

Dynamics of the stationary triple electron–nucleus–nuclear resonance —N. P. Baran, A. B. Brik, and S. S. Ishchenko. 37(2), 357–60 (Aug. 1973); CPM-7404E0611

66.80.+ Mossbauer effect; other γ–ray spectroscopy

The possibility of creating a nuclear γ laser —V. I. Gol'danskiĭ and Yu. Kagan. 37(1), 49–52 (Jul. 1973); CPM-7401D0751

Mössbauer investigation of the relation between the electron structure and the diffusion properties of impurity atoms —B. S. Bokshtein and A. A. Zhukhovitskiĭ. 37(1), 88–9 (Jul. 1973); CPM-7401D0790

Interference of nuclear and electron scatterings of 14.4 keV resonance γ–ray in Bragg reflection from an α–Fe_2O_3 crystal —A. N. Artem'ev, I. P. Perstnev, V. V. Sklyarevskiĭ, G. V. Smirnov, and E. P. Stepanov. 37(1), 136–41 (Jul. 1973); CPM-7401D0838

Study of the Debye–Waller factor near the temperature of a phase transition of the first kind in cobalt —B. S. Bokshteĭn, Yu. B. Voĭtkovskiĭ, G. S. Nikol'skiĭ, and I. M. Razumovskiĭ. 37(2), 283–4 (Aug. 1973); CPM-7404E0537

"Anomalous" variation of the Mossbauer isomer shift of Te^{125} in defective diamond-like semiconductors —K. V. Makaryunas, A. K. Dragunas, and M. L. Adominaĭte. 37(3), 449–51 (Sep. 1973); CPM-7406X1457

Suppression effect under conditions of purely nuclear Laue diffraction of resonant γ rays —V. V. Sklyarevskiĭ, G. V. Smirnov, A. N. Artem'ev, R. M. Mirzababaev, and E. P. Stepanov. 37(3), 474–5 (Sep. 1973); CPM-7406X1482

Temperature effects in quadrupole interaction in NbHf alloys —V. A. Klyucharev, V. P. Bozhko, and A. S. Bulatov. 37(4), 678–80 (Oct. 1973); CPM-7407X1420

Investigation of the magnetic hyperfine interaction for impurity tin atoms in dilute Pd–Co solid solutions at low temperatures —N. E. Alekseevskiĭ and Yu. A. Samarskiĭ. 37(4), 681–5 (Oct. 1973); CPM-7407X1423

Dynamic suppression of the maxima of interference bremsstrahlung emitted by ultrafast electrons in a single crystal —N. P. Kalashnikov. 37(4), 723–4 (Oct. 1973); CPM-7407X1465

Phase modulation of Mössbauer spectra and the generation of ultrasound in metals by a radio-frequency field —I. A. Dubovtsev, P. S. Zyryanov, and N. P. Filippova. 38(3), 509–14 (Mar. 1974); CPM-7411X0889

Narrowing of γ–resonance lines in crystals by radio-frequency fields —Yu. A. Il'inskiĭ and R. V. Khokhlov. 38(4), 809–12 (Apr. 1974); CPM-7502X0169

Temporal effects in resonant nuclear interactions of γ quanta with crystals —P. A. Aleksandrov. 38(5), 1022–7 (May 1974)

66.90.+ Other topics in magnetic resonance and relaxation

Kinetics of conduction electrons in multidomain ferromagnetic structures —R. I. Shekhter and A. S. Rozhavskiĭ. 38(2), 383–5 (Feb. 1974); CPM-7405F0601

Cyclotron resonance on nonextremal orbits —A. P. Volodin, M. S. Khaĭkin, and V. S. Édel'man. 38(5), 1052–6 (May 1974)

67. DIELECTRIC PROPERTIES AND MATERIALS

67.80.– Ferroelectricity and antiferroelectricity

Behavior of the specific heat of the ferroelectric phase of KH_3PO_4 near the transition temperature —S. R. Garber and L. A. Smolenko. 37(1), 94–101 (Jul. 1973); CPM-7401D0796

Phase transitions of the displacement type in crystals at very low temperatures —D. E. Khmel'nitskiĭ and V. L. Shneerson. 37(1), 164–70 (Jul. 1973); CPM-7401D0866

On the theory of ferroelectrics of the KH_2PO_4 type —V. G. Vaks and V. I. Zinenko. 37(2), 330–7 (Aug. 1973); CPM-7404E0584

Theory of phase transitions in semiconductors of the A_4B_6 group —V. A. Volkov and Yu. V. Kopaev. 37(6), 1103–8 (Dec. 1973); CPM-7412X0151

Study of phase transitions in KD_2PO_4 single crystals by the acoustic magnetic resonance technique —Kh. G. Bogdanova, Yu. V. Vladimirtsev, V. A. Golenishchev-Kutuzov, and U. Kh. Kopvillem. 38(3), 505–8 (Mar. 1974); CPM-7411X0885

67.90.+ Other topics in dielectric properties and materials

On the polarizability of tunneling defects —G. A. Andreev, V. I. Tal'yanskiĭ, and V. M. Fain. 37(3), 458–61 (Sep. 1973); CPM-7406X1466

Dynamics of impurity spin in a dielectric —A. V. Lazuta and S. V. Maleev. 38(5), 1038–42 (May 1974)

68. OPTICAL PROPERTIES AND CONDENSED-MATTER SPECTROSCOPY

68.20.– Optical properties and materials

Optical activity in the isotropic phase of cholesteric liquid crystals — E. I. Kats. 38(6), 1242–5 (Jun. 1974)

68.20.D Optical constants and parameters

Temperature dependence of the optical properties and the energy spectrum of zinc —R. G. Yarovaya, I. N. Shklyarevskiĭ, and A. F. A. El-Shazly. 38(2), 331–4 (Feb. 1974); CPM-7405F0549

68.20.H Piezo-, elasto-, and acousto-optical effects

Acoustic perturbations in a medium by the motion of a light focus — V. N. Lugovoĭ and V. N. Strel'tsov. 38(4), 701–4 (Apr. 1974); CPM-7502X0061

68.20.J Electro-optical effects

The possibility of creating artificial media possessing optical activity —G. A. Lyakhov. 37(3), 390–1 (Sep. 1973); CPM-7406X1398

Spontaneous electroabsorption in cadmium telluride and gallium arsenide —R. M. Akopyan, Yu. N. Berozashvili, A. V. Dundua, and D. Sh. Lordkipanidze. 38(5), 1003–7 (May 1974)

68.20.L Magneto-optical effects and properties

The possibility of creating artificial media possessing optical activity —G. A. Lyakhov. 37(3), 390–1 (Sep. 1973); CPM-7406X1398

Photothermomagnetic effect in a semimetal upon excitation of weakly damped waves —Sh. M. Kogan. 37(3), 544–5 (Sep. 1973); CPM-7406X1552

Magnetic birefringence and the domain structure of antiferromagnetic cobalt carbonate —N. F. Kharchenko, V. V. Eremenko, and O. P. Tutakina. 37(4), 672–7 (Oct. 1973); CPM-7407X1414

Magnetic birefringence of light in antiferromagnetic transition-metal fluorides —A. S. Borovik-Romanov, N. M. Kreines, A. A. Pankov, and M. A. Talalaev. 37(5), 890–6 (Nov. 1973); CPM-7410X0230

Magnetrooptical investigation of the magnetization compensation point in gadolinium iron garnets —O. A. Grzhegorzhevskii and R. V. Pisarev. 38(2), 312–6 (Feb. 1974); CPM-7405F0530

Anomalous magnetooptical properties of bismuth-containing iron garnets —G. S. Krinchik, V. A. Krylova, E. V. Berdennikova, and R. A. Petrov. 38(2), 354–6 (Feb. 1974); CPM-7405F0572

Exciton–magnon absorption of light in antiferromagnetic siderite —V. V. Eremenko, Yu. G. Litvinenko, A. A. Motornaya, V. I. Myatlik, and V. V. Shapiro. 38(3), 608–12 (Mar. 1974); CPM-7411X0988

Wave excitation by light and by a homogeneous alternating magnetic field —A. S. Bakaĭ and G. G. Sergeeva. 38(4), 840–6 (Apr. 1974); CPM-7502X0200

Quadratic magnetooptical reflection effects in ferromagnets —G. S. Krinchik and E. A. Gan'shina. 38(5), 983–7 (May 1974)

68.30.– Infrared and Raman spectra and scattering

Mechanism of contraction of the light pulse duration in stimulated Mandel'shtam–Brillouin scattering and the generation of nanosecond pulses —D. V. Vlasov. 37(6), 1001–3 (Dec. 1973); CPM-7412X0049

Influence of saturation on the amplification of light in stimulated Brillouin scattering —V. I. Kovalev, V. I. Popovichev, V. N. Ragul'skiĭ, and F. S. Faĭzullov. 37(6), 1023–4 (Dec. 1973); CPM-7412X0071

Critical fluctuations in external fields —E. L. Lakoza, V. M. Sysoev, and A. V. Chalyĭ. 38(2), 298–303 (Feb. 1974); CPM-7405F0516

On the theory of Raman scattering of light in superconductors —A. A. Abrikosov and V. M. Genkin. 38(2), 417–9 (Feb. 1974); CPM-7405F0635

Anistropy of stimulated Mandel'shtam–Brillouin scattering —L. M. Gorbunov. 38(4), 666–8 (Apr. 1974); CPM-7502X0026

Analysis of the anisotropic light scattering spectrum in liquids —L. A. Zubkov, N. B. Rozhdestvenskaya, and V. P. Romanov. 38(5), 891–7 (May 1974)

Fine structure of stimulated Raman scattering line in substances with small kerr constants —E. A. Morozova, A. I. Sokolovskaya, and M. M. Suschinskiĭ. 38(6), 1079–81 (Jun. 1974)

68.60.– Luminescence spectra and radiative recombination

Theory of spontaneous and stimulated electroluminescence of ZnS: Mn films —N. A. Vlasenko, S. I. Pekar, and V. S. Pekar. 37(1), 190–4 (Jul. 1973); CPM-7401D0892

Influence of the dynamic Jahn-Teller effect on the structure of quartet terms of the tetrahedrally coordinated ion Co^{2+}(ZnS—Co) —A. I. Ryskin, A. L. Natadze, and S. A. Kazanskiĭ. 37(3), 462–6 (Sep. 1973); CPM-7406X1470

Bose–Einstein condensation of dipole–active excitons and photons — S. A. Moskalenko, M. F. Miglei, M. I. Shmiglyuk, P. I. Khadzhi, and A. V. Lelyakov. 37(5), 902–8 (Nov. 1973); CPM-7410X0242

Optical orientation in a system of electrons and lattice nuclei in semiconductors. Experiment —V. L. Berkovits, A. I. Ekimov, and V. I. Safarov. 38(1), 169–76 (Jan. 1974); CPM-7405F0169

Optical orientation in a system of electrons and lattice nuclei in semiconductors. Theory —M. I. D'yakonov and V. I. Perel'. 38(1), 177–83 (Jan. 1974); CPM-7405F0177

Dependence of fluorescence characteristics on the spectral distribution of the intensity of the exciting electromagnetic field —V. G. Plotnikov and G. G. Konoplev. 38(3), 476–81 (Mar. 1974); CPM-7411X0856

68.80.+ Optical properties of thin films

Mechanism of the luminescene of polymer films during their formation as a result of bombardment of solids with ion beams — V. V. Gritsyna, T. S. Kiyan, A. G. Koval', Ya. M. Fogel', A. L. Seryugin, and I. S. Martynov. 37(1), 108–12 (Jul. 1973); CPM-7401D0810

Theory of spontaneous and stimulated electroluminescence of ZnS: Mn films —N. A. Vlasenko, S. I. Pekar, and V. S. Pekar. 37(1), 190–4 (Jul. 1973); CPM-7401D0892

Thin layers in acoustics and optics. changes in the transmission and reflection of sound and light on creation of a thin gas layer on the surface of a body in a liquid —G. A. Askar'yan, É. F. Bolshakov, E. Ya. Golts, and V. P. Logvinenko. 37(4), 587–9 (Oct. 1973); CPM-7407X1329

68.90.+ Other topics in optical properties of condensed matter

Effect of optical action on the "surface elasticity" of solid media —A. I. Bozhkov and F. V. Bunkin. 37(1), 156–8 (Jul. 1973); CPM-7401D0858

Submillimeter spectroscopy of semiconductors —E. M. Gershenzon, G. N. Gol'tsman, and N. G. Ptitsina. 37(2), 299–304 (Aug. 1973); CPM-7404E0553

Influence of the dynamic Jahn–Teller effect on the structure of quartet terms of the tetrahedrally coordinated ion Co^{2+}(ZnS—Co) —A. I. Ryskin, A. L. Natadze, and S. A. Kazanskiĭ. 37(3), 462–6 (Sep. 1973); CPM-7406X1470

Spectroscopy of vapors of low-volatility compounds supercooled in a supersonic stream —D. I. Kataev and A. A. Mal'tsev. 37(5), 772–7 (Nov. 1973); CPM-7410X0112

Radio-frequency size effect in tin cylinders —V. S. Tsoĭ. 37(6), 1078–82 (Dec. 1973); CPM-7412X0126

Analysis of the anisotropic light scattering spectrum in liquids —L. A. Zubkov, N. B. Rozhdestvenskaya, and V. P. Romanov. 38(5), 891–7 (May 1974)

Theory of scattering of electromagnetic waves in a degenerate electron liquid —A. N. Shaanova. 38(6), 1215–9 (Jun. 1974)

High-intensity electromagnetic wave in a cholesteric liquid crystal —S. G. Dmitriev. 38(6), 1231–2 (Jun. 1974)

69. ELECTRON AND ION EMISSION BY LIQUIDS AND SOLIDS; IMPACT PHENOMENA

69.20.– Impact phenomena, including electron spectra and sputtering

Mechanism of the luminescene of polymer films during their formation as a result of bombardment of solids with ion beams —V. V. Gritsyna, T. S. Kiyan, A. G. Koval', Ya. M. Fogel', A. L. Seryugin, and I. S. Martynov. 37(1), 108–12 (Jul. 1973); CPM-7401D0810

Group and successive pair collisions in scattering of Cs^+ ions by tungsten single crystals —V. I. Veksler and V. V. Evstifeev. 37(2), 290–3 (Aug. 1973); CPM-7404E0544

Electron scattering near the focus of a laser —V. M. Chernenko. 37 (6), 995–1000 (Dec. 1973); CPM-7412X0043

Transition-radiation detection of particles —M. P. Lorikyan. 38(4), 661–2 (Apr. 1974); CPM-7502X0021

Investigation of x-ray transition radiation in foamed plastic —A. I. Alikhanyan, É. S. Belyakov, M. P. Lorikyan, K. Jh. Makaryan, and K. K. Shikhlyarov. 38(4), 663–5 (Apr. 1974); CPM-7502X0023

Coherent radio waves from emissions produced by action of short laser pulses on a metal surface —I. N. Arutyunyan and G. A. Askar'yan. 38(6), 1105–6 (Jun. 1974)

Effect of laser radiation on superconductivity —R. A. Vardanyan and B. I. Ivlev. 38(6), 1156–61 (Jun. 1974)

69.90.+ Other Topics in emission and impact phenomena in condensed matter

On the theory of the inelastic tunnel effect in normal metals —S. I. Shevchenko. 37(5), 897–901 (Nov. 1973); CPM-7410X0237

Angular distribution of photoelectrons with a given spin orientation —N. A. Cherepkov. 38(3), 463–9 (Mar. 1974); CPM-7411X0843

Coherent radio waves from emissions produced by action of short laser pulses on a metal surface —I. N. Arutyunyan and G. A. Askar'yan. 38(6), 1105–6 (Jun. 1974)

71. OPTICS

71.10.– Propagation and transmission in homogeneous and isotropic media

Waves and forces in a homogeneous medium with time-varying properties —G. A. Askar'yan and V. A. Pogosyan. 38(1), 58–60 (Jan. 1974); CPM-7405F0058

Nonlinear Fraunhofer diffraction —S. V. Manakov. 38(4), 693–6 (Apr. 1974); CPM-7502X0053

71.15.+ Propagation and transmission in homogeneous and anisotropic media

The transfer equations for normal waves and radiation polarization in an anisotropic medium —Yu. N. Gnedin and G. G. Pavlov. 38(5), 903–8 (May 1974)

71.20.– Propagation and transmission in inhomogeneous media

On the statistical theory of reflection of light in randomly inhomogeneous media —V. I. Klyatskin. 38(1), 27–9 (Jan. 1974); CPM-7405F0027

71.30.– Information theory

Orienting effect of an electric field on nematic liquid crystals —P. D. Berezin, I. N. Kompanets, V. V. Nikitin, and S. A. Pikin. 37(2), 305–8 (Aug. 1973); CPM-7404E0559

71.35.– Image formation

Influence of resonance charge exchange on the resolution and contrast of a field-ion image —P. A. Bereznyak and I. M. Mikhailovskiĭ. 38(2), 233–5 (Feb. 1974); CPM-7405F0451

71.50.+ Quantum optics

Quantum fluctuations in the photon flux in vacuum and in the diffraction pattern —V. U. Zavorotnyĭ and V. I. Tatarskiĭ. 37(2), 231–5 (Aug. 1973); CPM-7404E0485

Spectroscopy of two-quantum transitions in a gas near resonances —I. M. Beterov, Yu. A. Matyugin, and V. P. Chebotaev. 37(5), 756–63 (Nov. 1973); CPM-7410X0096

Frequency tunable of giant pulses in spectrally inhomogeneous media —V. B. Markov, T. Ya. Marusiĭ, M. S. Soskin, and A. I. Khizhnyak. 37(5), 778–83 (Nov. 1973); CPM-7410X0118

Coherent light emission by atoms excited by fast particles in an electromagnetic field —M. I. Ryazanov. 38(1), 61–4 (Jan. 1974); CPM-7405F0061

71.60.– Lasers

Electric ionization lasers —N. G. Basov, É. M. Belenov, V. A. Danilychev, O. M. Kerimov, I. B. Kovsh, A. S. Podsosonnyĭ, and A. F. Suchkov. 37(1), 58–64 (Jul. 1973); CPM-7401D0760

Electron kinetics and stationary generation in semiconductor lasers —V. M. Galitskiĭ and V. F. Elesin. 37(2), 351–6 (Aug. 1973); CPM-7404E0605

Spatial field and intensity correlation functions of laser radiation —A. G. Arutyunyan, S. A. Akhmanov, Yu. D. Golyaev, V. G. Tunkin, and A. S. Chirkin. 37(5), 764–71 (Nov. 1973); CPM-7410X0104

On the problem of the nuclear-transition γ-laser —V. S. Letokhov. 37 (5), 787–93 (Nov. 1973); CPM-7410X0127

Electron scattering near the focus of a laser —V. M. Chernenko. 37 (6), 995–1000 (Dec. 1973); CPM-7412X0043

Investigation of light amplification in a pulsed acetylene-air combustion gasdynamic laser —G. I. Kozlov, V. N. Ivanov, and A. S. Korablev. 38(1), 41–3 (Jan. 1974); CPM-7405F0041

Kinetic model of formation of inverse populations in a carbon monoxide gas-discharge laser —N. N. Sobolev, V. V. Sokovikov, and V. G. Taranenko. 38(1), 44–8 (Jan. 1974); CPM-7405F0044

Collision-radiative processes and molecular lasers —M. M. Mkrtchyan, V. T. Platonenko, and R. V. Khokhlov. 38(1), 71–4 (Jan. 1974); CPM-7405F0071

Distribution of hot phonons generated by laser radiation —I. B. Levinson. 38(1), 162–6 (Jan. 1974); CPM-7405F0162

Radiation transfer in quantum electrodynamics —Yu. M. Golubev. 38 (2), 228–32 (Feb. 1974); CPM-7405F0446

Direct observation of the picosecond structure of radiation pulses from a mode-locked neodymium laser —N. G. Basov, M. M. Butslov, P. G. Kryukov, Yu. A. Matveev, E. A. Smirnova, B. M. Stepanov, S. D. Fanchenko, S. V. Chekalin, and R. V. Chikin. 38 (3), 449–53 (Mar. 1974); CPM-7411X0829

71.60.C Gas and ion lasers

Electric ionization lasers —N. G. Basov, É. M. Belenov, V. A. Danilychev, O. M. Kerimov, I. B. Kovsh, A. S. Podsosonnyĭ, and A. F. Suchkov. 37(1), 58–64 (Jul. 1973); CPM-7401D0760

Excitation of vibrational levels in the $N^{14}H_3$ molecule by radiation from a CO_2 laser —R. V. Ambartsumyan, V. S. Letokhov, G. N. Markarov, A. G. Platova, A. A. Puretskiĭ, and O. A. Tumanov. 37 (3), 392–8 (Sep. 1973); CPM-7406X1400
Contribution to the theory of nonlinear power resonances in gas lasers —V. A. Alekseev, T. L. Andreeva, and I. I. Sobel'man. 37(3), 413–8 (Sep. 1973); CPM-7406X1421
A method for measuring collision broadening of spectral lines —B. V. Rybakov, S. S. Skulachenko, A. M. Khromykh, and I. I. Yudin. 37 (4), 582–3 (Oct. 1973); CPM-7407X1324
Investigation of light amplification in a pulsed acetylene–air combustion gasdynamic laser —G. I. Kozlov, V. N. Ivanov, and A. S. Korablev. 38(1), 41–3 (Jan. 1974); CPM-7405F0041
Mode locking in gas lasers —S. A. Gonchukov, V. M. Ermanchenko, and E. D. Protsenko. 38(2), 239–42 (Feb. 1974); CPM-7405F0457
Photodissociative I^{127} laser in a magnetic field —I. M. Belousova, B. D. Bobrov, V. M. Kiselev, V. N. Kurzenkov, and P. I. Krepostnov. 38(2), 258–63 (Feb. 1974); CPM-7405F0476

71.60.G Solid lasers

Experimental investigation of the generation kinetics of a ruby laser with a nonstationary resonator —Yu. E. Pol'skiĭ and A. A. Yakutenkov. 37(2), 223–6 (Aug. 1973); CPM-7404E0477
Electron kinetics and stationary generation in semiconductor lasers — V. M. Galitskiĭ and V. F. Elesin. 37(2), 351–6 (Aug. 1973); CPM-7404E0605
Frequency tunable of giant pulses in spectrally inhomogeneous media —V. B. Markov, T. Ya. Marusiĭ, M. S. Soskin, and A. I. Khizhnyak. 37(5), 778–83 (Nov. 1973); CPM-7410X0118
Direct observation of the picosecond structure of radiation pulses from a mode–locked neodymium laser —N. G. Basov, M. M. Butslov, P. G. Kryukov, Yu. A. Matveev, E. A. Smirnova, B. M. Stepanov, S. D. Fanchenko, S. V. Chekalin, and R. V. Chikin. 38 (3), 449–53 (Mar. 1974); CPM-7411X0829
Oscillation regimes in a rotating solid–state ring laser —E. L. Klochan, L. S. Kornienko, N. V. Kravtsov, E. G. Lariontsev, and A. N. Shelaev. 38(4), 669–74 (Apr. 1974); CPM-7502X0029

71.60.L Laser resonators and cavities

Experimental investigation of the generation kinetics of a ruby laser with a nonstationary resonator —Yu. E. Pol'skiĭ and A. A. Yakutenkov. 37(2), 223–6 (Aug. 1973); CPM-7404E0477
On the theory of open resonators —S. Yu. Slavyanov. 37(3), 399–403 (Sep. 1973); CPM-7406X1407
Excitation of ultrashort light pulses in a ruby ring laser with resonance loss modulation —G. V. Krivoshchekov, L. A. Kulevskiĭ, N. G. Nikulin, V. M. Semibalamut, V. A. Smirnov, and V. V. Smirnov. 37(6), 1007–11 (Dec. 1973); CPM-7412X0055

71.60.Q Laser beam applications

Stimulation of chemical reactions by laser radiation —N. G. Basov, E. M. Belenov, E. P. Markin, A. N. Oraevskiĭ, and A. V. Pankratov. 37(2), 247–52 (Aug. 1973); CPM-7404E0501
Excitation of vibrational levels in the $N^{14}H_3$ molecule by radiation from a CO_2 laser —R. V. Ambartsumyan, V. S. Letokhov, G. N. Markarov, A. G. Platova, A. A. Puretskiĭ, and O. A. Tumanov. 37 (3), 392–8 (Sep. 1973); CPM-7406X1400
Kinetics of nonequilibrium dissociation of molecules in cascade excitation of oscillations by laser radiation —B. F. Gordiets, A. I. Osipov, and V. Ya. Panchenko. 38(3), 443–8 (Mar. 1974); CPM-7411X0823
Fine structure of luminescence spectra of laser–excited organic molecules and the nature of the broad spectral bands of solid solutions —R. I. Personov, E. I. Al'shitz, L. A. Bykovskaya, and B. M. Kharlamov. 38(5), 912–7 (May 1974)

71.65.– Nonlinear optics

Quantum theory of nonlinear oscillators interacting with the medium —M. I. Dykman and M. A. Krivoglaz. 37(3), 506–11 (Sep. 1973); CPM-7406X1514
Role of self–focusing of laser radiation on breakdown in liquid He^4 — I. I. Abrikosova and B. V. Anshukov. 37(4), 579–81 (Oct. 1973); CPM-7407X1321
On the theory of transition radiation in a nonstationary medium —V. L. Ginzburg and V. N. Tsytovich. 38(1), 65–70 (Jan. 1974); CPM-7405F0065
Passage of weak Gaussian beam through a nonlinear medium —V. N. Lugovoĭ. 38(3), 439–42 (Mar. 1974); CPM-7411X0819

71.65.D Stimulated Raman, parametric oscillations, and other interactions of radiation with matter

Spatial dispersion of two–photon absorption —D. N. Klyshko and B. V. Polkovnikov. 37(1), 154–5 (Jul. 1973); CPM-7401D0856
Self–transparency in gallium arsenide on two–photon interaction with an ultrashort light pulse —T. L. Gvardzhaladze, A. Z. Grasyuk, and V. A. Kovalenko. 37(2), 227–30 (Aug. 1973); CPM-7404E0481
Nonlinear narrow density resonances of excited molecules in a standing light wave —V. S. Letokhov and B. D. Pavlik. 37(3), 408–12 (Sep. 1973); CPM-7406X1416
Contribution to the theory of nonlinear power resonances in gas lasers —V. A. Alekseev, T. L. Andreeva, and I. I. Sobel'man. 37(3), 413–8 (Sep. 1973); CPM-7406X1421
Stimulated light scattering and four–photon processes —D. N. Klyshko. 37(4), 590–4 (Oct. 1973); CPM-7407X1332
Theory of stimulated Raman scattering by rotational transitions —Yu. A. Il'inskiĭ and R. V. Khokhlov. 37(4), 619–21 (Oct. 1973); CPM-7407X1361
Spectroscopy of two–quantum transitions in a gas near resonances —I. M. Beterov, Yu. A. Matyugin, and V. P. Chebotaev. 37(5), 756–63 (Nov. 1973); CPM-7410X0096
Investigation of stimulated four–photon parametric scattering of laser radiation in alkali–metal vapor —A. M. Bonch–Bruevich, S. G. Przhibelskiĭ, V. A. Khodovoĭ, and V. V. Khromov. 38(1), 30–6 (Jan. 1974); CPM-7405F0030
Susceptibility of the ferrite spin system above the parametric excitation threshold —Ya. A. Monosov, V. V. Surin, and V. A. Shakhunov. 38(5), 951–3 (May 1974)
Quadratic magnetooptical reflection effects in ferromagnets —G. S. Krinchik and E. A. Gan'shina. 38(5), 983–7 (May 1974)

71.65.H Beam trapping and related effects

On the multifocus structure of light beams in nonlinear media —A. L. Dyshko, V. N. Lugovoĭ, and A. M. Prokhorov. 38(4), 680–3 (Apr. 1974); CPM-7502X0040

71.90.+ Other topics in optics

Spectroscopy of vapors of low–volatility compounds supercooled in a supersonic stream —D. I. Kataev and A. A. Mal'tsev. 37(5), 772–7 (Nov. 1973); CPM-7410X0112

72. ACOUSTICS

Magnetic hyperfine interaction for Co^{60} in PdRhCo alloys —A. L. Erzinkyan, V. P. Parfenova, and Yu. N. Sokhanenkov. 37(3), 487–90 (Sep. 1973); CPM-7406X1495

74. PHYSICAL CHEMISTRY

74.50.– Photochemistry and radiation chemistry

Stimulation of chemical reactions by laser radiation —N. G. Basov, E. M. Belenov, E. P. Markin, A. N. Oraevskiĭ, and A. V. Pankratov. 37(2), 247–52 (Aug. 1973); CPM-7404E0501
Photochemical decomposition waves —B. L. Borovich, V. S. Zuev, and O. N. Krokhin. 37(4), 602–4 (Oct. 1973); CPM-7407X1344
Similarity of photodissociation waves and experimental determination of the primary period of the photochemical process —B. L. Borovich, V. Ya. Karpov, N. I. Kozlov, and Yu. Yu. Stoĭlov. 37(4), 616–8 (Oct. 1973); CPM-7407X1358
Accumulation of iodine molecules in flash photolysis of CF_3I and $n–C_3F_7I$ vapor —I. M. Belousova, N. G. Gorshkov, O. B. Danilov, V. Yu. Zalesskiĭ, and I. L. Yachnev. 38(2), 254–7 (Feb. 1974); CPM-7405F0472

74.90.+ Other topics in physical chemistry

The mass–reflectron, a new nonmagnetic time–of–fight mass spectrometer with high resolution —B. A. Mamyrin, V. I. Karataev, D. V. Shmikk, and V. A. Zagulin. 37(1), 45–8 (Jul. 1973); CPM-7401D0747

Resonant charge exchange between dipole molecules —R. Z. Vitlina. 37(3), 404–5 (Sep. 1973); CPM-7406X1412

Temperature dependence of the viscosity of binary solutions near the critical solution temperature —N. V. Kuskova and E. V. Matizen. 37(3), 501–3 (Sep. 1973); CPM-7406X1509

Phase transitions in a monolayer on the surface of a metal —L. A. Bol'shov and P. Napartovich. 37(4), 713–7 (Oct. 1973); CPM-7407X1455

Reflection of conduction electrons from an atomically pure (110) face a of a tungsten crystal —P. P. Lutsishin, O. A. Panchenko, and A. A. Kharlamov. 37(6), 1083–5 (Dec. 1973); CPM-7412X0131

Kinetic model of formation of inverse populations in a carbon monoxide gas–discharge laser —N. N. Sobolev, V. V. Sokovikov, and V. G. Taranenko. 38(1), 44–8 (Jan. 1974); CPM-7405F0044

On the theory of two–dimensional stationary self–focusing of electromagnetic waves —S. V. Manakov. 38(2), 248–53 (Feb. 1974); CPM-7405F0466

On the kinetics of magnetization of suspensions of ferromagnetic particles —M. A. Martsenyuk, Yu. L. Raĭkher, and M. I. Shliomis. 38(2), 413–6 (Feb. 1974); CPM-7405F0631

Kinetics of nonequilibrium dissociation of molecules in cascade excitation of oscillations by laser radiation —B. F. Gordiets, A. I. Osipov, and V. Ya. Panchenko. 38(3), 443–8 (Mar. 1974); CPM-7411X0823

75. MATERIALS SCIENCE AND METALLURGY

Orienting effect of an electric field on nematic liquid crystals —P. D. Berezin, I. N. Kompanets, V. V. Nikitin, and S. A. Pikin. 37(2), 305–8 (Aug. 1973); CPM-7404E0559

Spectroscopy of vapors of low–volatility compounds supercooled in a supersonic stream —D. I. Kataev and A. A. Mal'tsev. 37(5), 772–7 (Nov. 1973); CPM-7410X0112

Behavior of nematic liquid crystals in a rotating magnetic field —E. I. Kats. 38(1), 158–61 (Jan. 1974); CPM-7405F0158

On the kinetics of magnetization of suspensions of ferromagnetic particles —M. A. Martsenyuk, Yu. L. Raĭkher, and M. I. Shliomis. 38(2), 413–6 (Feb. 1974); CPM-7405F0631

76. ELECTROMAGNETIC TECHNOLOGY

Instability of waveguides and solitons in nonlinear media —V. E. Zakharov and A. M. Rubenchik. 38(3), 494–500 (Mar. 1974); CPM-7411X0874

77. ELECTRICAL AND MAGNETIC DEVICES

Excitation of oscillations of charge carrier density in a tunnel junction —Yu. M. Ivanchenko and Yu. V. Medvedev. 37(3), 520–4 (Sep. 1973); CPM-7406X1528

84. GALACTIC AND EXTRAGALACTIC ASTRONOMY

84.60.– High–energy astrophysics and cosmology

A hypothesis relating the entropy to the inhomogeneity of the universe —Ya. B. Zel'dovich. 37(1), 33–7 (Jul. 1973); CPM-7401D0735

The isotropization of homogeneous cosmological models —A. G. Doroshkevich, V. N. Lukash, and I. D. Novikov. 37(5), 739–46 (Nov. 1973); CPM-7410X0079

Singularities of the cosmological model of the Bianchi IX type according to the qualitative theory of differential equations —O. I. Bogoyavlenskiĭ and S. P. Novikov. 37(5), 747–55 (Nov. 1973); CPM-7410X0087

Measurement of the relaxation time on acceleration of vessels with helium II and superfluidity in pulsars —J. S. Tsakadze and S. J. Tsakadze. 37(5), 918–21 (Nov. 1973); CPM-7410X0258

Deviation of an expanding universe that is isotropic in the mean from the Friedmann universe —A. V. Byalko. 38(3), 421–6 (Mar. 1974); CPM-7411X0801

86. SOLAR SYSTEM

"Antidynamo"—A possible mechanism of phenomena occurring in neutral layers of a magnetic field —S. I. Vainshtein. 38(2), 270–5 (Feb. 1974); CPM-7405F0488

AUTHOR INDEX TO VOLUMES 37-38

Papers are arranged in ascending page number order.

A

Abakarov, D. I.—Scattering of an electron in an electromagnetic wave and in a homogeneous magnetic field —D. I. Abakarov and V. P. Oleĭnik. **37**(5), 784–6 (Nov. 1973); CPM-7410X0124

Abov, Yu. G.—Violation of P parity in the reaction $^{113}Cd(n,\gamma)^{114}Cd$ —Yu. G. Abov, O. N. Ermakov, and P. A. Krupchitskiĭ. **38**(5), 870–3 (May 1974)

Abrikosov, A. A.—On the theory of impurity ferromagnetism in semiconductors —A. A. Abrikosov. **38**(2), 403–7 (Feb. 1974); CPM-7405F0621

—On the theory of Raman scattering of light in superconductors —A. A. Abrikosov and V. M. Genkin. **38**(2), 417–9 (Feb. 1974); CPM-7405F0635

—On the phase diagram of an excitonic insulator in a strong magnetic field —A. A. Abrikosov. **38**(4), 750–4 (Apr. 1974); CPM-7502X0110

—Some problems in the theory of semimetals —A. A. Abrikosov. **38**(5), 1031–7 (May 1974)

Abrikosova, I. I.—Role of self–focusing of laser radiation on breakdown in liquid He^4 —I. I. Abrikosova and B. V. Anshukov. **37**(4), 579–81 (Oct. 1973); CPM-7407X1321

Abrosimov, V. M.—Size effect of kinetic coefficients in polycrystalline bismuth films —V. M. Abrosimov, B. N. Egorov, and M. A. Krykin. **37**(1), 113–6 (Jul. 1973); CPM-7401D0815

Abu–Asali, E.—Nonlinear oscillations of an unstable plasma —E. Abu–Asali, B. A. Al'terkop, and A. A. Rukhadze. **37**(5), 820–2 (Nov. 1973); CPM-7410X0160

Abu–Asali, E. A.—Nonlinear ion surface oscillations in a semi–restricted current–carrying plasma —E. A. Abu–Asali, B. A. Al'terkop, R. D. Dzhamalov, and A. A. Rukhadze. **37**(6), 1034–6 (Dec. 1973); CPM-7412X0082

Adominaĭte, M. L.—"Anomalous" variation of the Mossbauer isomer shift of Te^{125} in defective diamond–like semiconductors —K. V. Makaryunas, A. K. Dragunas, and M. L. Adominaĭte. **37**(3), 449–51 (Sep. 1973); CPM-7406X1457

Afanas'ev, A. M.—Suppression of the inelastic channels of a nuclear reaction in a crystal under the conditions of hyperfine splitting —A. M. Afanas'ev and Yu. Kagan. **37**(6), 987–92 (Dec. 1973); CPM-7412X0035

—Suppression of inelastic channels under hyperfine splitting conditions. Interference phenomena —A. M. Afanas'ev and I. P. Perstnev. **38**(3), 630–3 (Mar. 1974); CPM-7411X1010

Afrosimov, V. V.—Interaction of protons and hydrogen atoms with CO molecules —V. V. Afrosimov, G. A. Leĭko, Yu. A. Mamaev, M. N. Panov, and M. Vuĭovich. **38**(2), 243–7 (Feb. 1974); CPM-7405F0461

Akhiezer, A. I.—Electron–electron collisions and the electric conductivity of metals at low temperatures —A. I. Akhiezer, I. A. Akhiezer, and V. G. Bar'yakhtar. **38**(1), 167–8 (Jan. 1974); CPM-7405F0167

Akhiezer, I. A.—Electron–electron collisions and the electric conductivity of metals at low temperatures —A. I. Akhiezer, I. A. Akhiezer, and V. G. Bar'yakhtar. **38**(1), 167–8 (Jan. 1974); CPM-7405F0167

Akhmanov, S. A.—Spatial field and intensity correlation functions of laser radiation —A. G. Arutyunyan, S. A. Akhmanov, Yu. D. Golyaev, V. G. Tunkin, and A. S. Chirkin. **37**(5), 764–71 (Nov. 1973); CPM-7410X0104

Akopyan, R. M.—Spontaneous electroabsorption in cadmium telluride and gallium arsenide —R. M. Akopyan, Yu. N. Berozashvili, A. V. Dundua, and D. Sh. Lordkipanidze. **38**(5), 1003–7 (May 1974)

Akulichev, V. A.—Tensile strength of liquid hydrogen —V. A. Akulichev and V. A. Bulanov. **38**(2), 329–30 (Feb. 1974); CPM-7405F0547

Aleksandrov, A. F.—Investigation of equilibrium and stability of self–contracted discharges in an optically dense plasma —A. F. Aleksandrov, V. V. Zosimov, A. A. Rukhadze, V. I. Savoskin, and I. B. Timofeev. **37**(5), 794–800 (Nov. 1973); CPM-7410X0134

Aleksandrov, A. S.—Alternating oscillations in the photocurrent spectra of nonequuilibrium photoelectrons in p–type InSb subjected to quantizing magnetic fields —A. S. Aleksandrov, Yu. A. Bykovskiĭ, V. F. Elesin, E. A. Protasov, and A. G. Rodionov. **37**(1), 120–6 (Jul. 1973); CPM-7401D0822

Aleksandrov, B. N.—Resistivities of rubidium and potassium at helium temperatures —B. N. Aleksandrov, O. I. Lomonos, and E. D. Semenova. **37**(2), 294–6 (Aug. 1973); CPM-7404E0548

—Deviations from the Matthiessen rule in the temperature range 2 to 14°K in Sn, In, Hg, and Ti containing small quantities of impurities —O. I. Lomonos and B. N. Aleksandrov. **37**(6), 1137–40 (Dec. 1973); CPM-7412X0185

Aleksandrov, P. A.—Temporal effects in resonant nuclear interactions of γ quanta with crystals —P. A. Aleksandrov. **38**(5), 1022–7 (May 1974)

Aleksandrov, V. V.—Development of instability and the neutron emission by a Z–pinch —V. V. Aleksandrov, N. G. Koval'skiĭ, S. Yu. Lukyanov, V. A. Rantsev–Kartinov, and M. M. Stepanenko. **37**(4), 622–4 (Oct. 1973); CPM-7407X1364

Alekseev, A. A.—Dissipation of the energy of a dislocation moving in a random field of internal stresses —A. A. Alekseev and B. M. Strunin. **38**(6), 1144–6 (Jun. 1974)

Alekseev, V. A.—Contribution to the theory of nonlinear power resonances in gas lasers —V. A. Alekseev, T. L. Andreeva, and I. I. Sobel'man. **37**(3), 413–8 (Sep. 1973); CPM-7406X1421

Alekseevskiĭ, N. E.—Investigation of the magnetic hyperfine interaction for impurity tin atoms in dilute Pd–Co solid solutions at low temperatures —N. E. Alekseevskiĭ and Yu. A. Samarskiĭ. **37**(4), 681–5 (Oct. 1973); CPM-7407X1423

—Effect of magnetic breakdown on the Hall effect in beryllium —N. E. Alekseevskiĭ and V. I. Nizhankovskiĭ. **38**(3), 533–7 (Mar. 1974); CPM-7411X0913

Aliev, Kh. K.—Critical singularities of the propagation of ultrasonic waves in yttrium iron garnet near the Curie point —I. K. Kamilov and Kh. K. Aliev. **38**(5), 954–6 (May 1974)

Alikhanyan, A. I.—Investigation of x–ray transition radiation in foamed plastic —A. I. Alikhanyan, É. S. Belyakov, M. P. Lorikyan, K. Jh. Makaryan, and K. K. Shikhlyarov. **38**(4), 663–5 (Apr. 1974); CPM-7502X0023

Alimov, D. T.—Frequency dependence of multiphoton ionization of Xe and Kr atoms —D. T. Alimov, N. K. Berezhetskaya, G. A. Delone, and N. B. Delone. **37**(4), 599–601 (Oct. 1973); CPM-7407X1341

A'lpert, Ya. L.—Turning region of the Poynting vector of a wave incident on an inhomogeneous plasma towards the direction of an external magnetic field —Ya. L. A'lpert and R. N. Kaufman. **37**(4), 651–4 (Oct. 1973); CPM-7407X1393

Al'shin, B. I.—Investigation of the $BaMnF_4$ phase diagram by the antiferromagnetic resonance technique —A. V. Tishchenko, B. I. Al'shin, and D. N. Astrov. **38**(4), 789–93 (Apr. 1974); CPM-7502X0149

Al'shitz, E. I.—Fine structure of luminescence spectra of laser–excited organic molecules and the nature of the broad spectral bands of solid solutions —R. I. Personov, E. I. Al'shitz, L. A. Bykovskaya, and B. M. Kharlamov. **38**(5), 912–7 (May 1974)

Al'shitz, V. I.—Electron drag elastic field sources and the conductivity of metals —V. I. Al'shitz and V. L. Indenbom. **37**(5), 914–7 (Nov. 1973); CPM-7410X0254

Al'terkop, B. A.—Nonlinear oscillations of an unstable plasma —E. Abu–Asali, B. A. Al'terkop, and A. A. Rukhadze. **37**(5), 820–2 (Nov. 1973); CPM-7410X0160

—Nonlinear ion surface oscillations in a semi–restricted current–carrying plasma —E. A. Abu–Asali, B. A. Al'terkop, R. D. Dzhamalov, and A. A. Rukhadze. **37**(6), 1034–6 (Dec. 1973); CPM-7412X0082

Alyamovskiĭ, V. N.—Rate of energy transfer in a plasma —V. N. Alyamovskiĭ. 37(1), 86–7 (Jul. 1973); CPM-7401D0788

Ambartsumyan, R. V.—Excitation of vibrational levels in the $N^{14}H_3$ molecule by radiation from a CO_2 laser —R. V. Ambartsumyan, V. S. Letokhov, G. N. Markarov, A. G. Platova, A. A. Puretskiĭ, and O. A. Tumanov. 37(3), 392–8 (Sep. 1973); CPM-7406X1400

Amulyavichus, A. P.—Investigation of the superparamagnetic properties of ultrafine iron particles by Mössbauer spectroscopy — A. P. Amulyavichus and I. P. Suzdalev. 37(5), 859–63 (Nov. 1973); CPM-7410X0199

Anders, E. E.—Thermal conductivity and the temperature dependences of the energy gaps of niobium samples containing large amounts of impurity atoms —E. E. Anders, B. Ya. Sukharevskiĭ, and I. V. Volchok. 37(5), 852–6 (Nov. 1973); CPM-7410X0192

Andratskiĭ, V. P.—Destruction of superconductivity in thin narrow films by a current —V. P. Andratskiĭ, L. M. Grundel', V. N. Gubankov, and N. B. Pavlov. 38(4), 794–8 (Apr. 1974); CPM-7502X0154

Andreenko, A. S.—Magnetocaloric effect in compounds of rare-earth metals with iron —S. A. Nikitin, E. V. Talalaeva, L. A. Chernikova, and A. S. Andreenko. 38(5), 1028–30 (May 1974)

Andreev, A. F.—Structure of shock waves —A. F. Andreev and A. E. Meierovich. 37(5), 829–34 (Nov. 1973); CPM-7410X0169

—Fluctuation theory of the two-dimensional mixed state in type I superconductors —A. F. Andreev and W. Bestgen. 37(5), 942–9 (Nov. 1973); CPM-7410X0282

—Macroscopic bodies with zero rest mass —A. F. Andreev. 38(4), 648–51 (Apr. 1974); CPM-7502X0008

Andreev, G. A.—On the polarizability of tunneling defects —G. A. Andreev, V. I. Tal'yanskiĭ, and V. M. Faĭn. 37(3), 458–61 (Sep. 1973); CPM-7406X1466

Andreeva, T. L.—Contribution to the theory of nonlinear power resonances in gas lasers —V. A. Alekseev, T. L. Andreeva, and I. I. Sobel'man. 37(3), 413–8 (Sep. 1973); CPM-7406X1421

Andrianov, V. A.—On the superfluidity of the Fermi component in a Fermi–Bose gas and in He^3–He^4 solutions —V. A. Andrianov and V. N. Popov. 37(5), 940–1 (Nov. 1973); CPM-7410X0280

Anisimov, S. I.—The dynamics of the expansion of a vapor when evaporated into a vacuum —S. I. Anisimov and A. Kh. Rakhmatulina. 37(3), 441–4 (Sep. 1973); CPM-7406X1449

Anshukov, B. V.—Role of self-focusing of laser radiation on breakdown in liquid He^4 —I. I. Abrikosova and B. V. Anshukov. 37(4), 579–81 (Oct. 1973); CPM-7407X1321

Antipov, S. V.—Quasistationary supercooled (recombining) plasma produced by an electron beam in a dense gas —S. V. Antipov, M. V. Nezlin, E. N. Snezhkin, and A. S. Trubnikov. 38(5), 931–7 (May 1974)

Anzin, V. B.—Influence of hydrostatic pressure on the splitting of the Landau levels in tellurium —V. B. Anzin, M. S. Bresler, E. S. Itskevich, Yu. V. Kosichkin, V. A. Sukhoparov, A. N. Tolmachev, and I. I. Farbshtein. 38(4), 755–8 (Apr. 1974); CPM-7502X0115

Arendarchuk, V. V.—Singularities of energy states of localized electrons in strongly compensated n–InSb —V. V. Arendarchuk, E. M. Gershenzon, L. B. Litvak-Gorskaya, and R. I. Rabinovich. 38 (6), 1192–7 (Jun. 1974)

Aronov, A. G.—Stability of nonequilibrium Fermi distributions with respect to Cooper pairing —A. G. Aronov and V. L. Gurevich. 38 (3), 550–6 (Mar. 1974); CPM-7411X0930

Artem'ev, A. N.—Interference of nuclear and electron scatterings of 14.4 keV resonance γ-ray in Bragg reflection from an α-Fe_2O_3 crystal —A. N. Artem'ev, I. P. Perstnev, V. V. Sklyarevskiĭ, G. V. Smirnov, and E. P. Stepanov. 37(1), 136–41 (Jul. 1973); CPM-7401D0838

—Suppression effect under conditions of purely nuclear Laue diffraction of resonant γ rays —V. V. Sklyarevskiĭ, G. V. Smirnov, A. N. Artem'ev, R. M. Mirzababaev, and E. P. Stepanov. 37(3), 474–5 (Sep. 1973); CPM-7406X1482

Artsimovich, L. L.—Interaction between a high frequency magnetic field and potential plasma oscillations in a Q-device —L. L. Artsimovich, A. A. Ivanov, A. N. Luk'yanchuk, V. L. Papernyĭ, V. D. Rusanov, and S. S. Sobolev. 37(2), 236–9 (Aug. 1973); CPM-7404E0490

Artyukhovskaya, L. M.—Experimental investigation of some peculiarities of the equation of state of heptane near the critical point —L. M. Artyukhovskaya, E. T. Shimanskaya, and Yu. I. Shimanskiĭ. 37(5), 848–51 (Nov. 1973); CPM-7410X0188

Arutyunyan, A. G.—Spatial field and intensity correlation functions of laser radiation —A. G. Arutyunyan, S. A. Akhmanov, Yu. D. Golyaev, V. G. Tunkin, and A. S. Chirkin. 37(5), 764–71 (Nov. 1973); CPM-7410X0104.

Arutyunyan, F. R.—Radiation by electrons due to roughness of a metallic surface —F. R. Arutyunyan, A. Kh. Mkhitaryan, R. A. Oganesyan, and B. O. Rostomyan. 38(5), 886–90 (May 1974)

Arutyunyan, I. N.—Coherent radio waves from emissions produced by action of short laser pulses on a metal surface —I. N. Arutyunyan and G. A. Askar'yan. 38(6), 1105–6 (Jun. 1974)

Askar'yan, G. A.—Thin layers in acoustics and optics. changes in the transmission and reflection of sound and light on creation of a thin gas layer on the surface of a body in a liquid —G. A. Askar'yan, É. F. Bolshakov, E. Ya. Golts, and V. P. Logvinenko. 37(4), 587–9 (Oct. 1973); CPM-7407X1329

—Waves and forces in a homogeneous medium with time-varying properties —G. A. Askar'yan and V. A. Pogosyan. 38(1), 58–60 (Jan. 1974); CPM-7405F0058

—Coherent radio waves from emissions produced by action of short laser pulses on a metal surface —I. N. Arutyunyan and G. A. Askar'yan. 38(6), 1105–6 (Jun. 1974)

Astrov, D. N.—Investigation of the $BaMnF_4$ phase diagram by the antiferromagnetic resonance technique —A. V. Tishchenko, B. I. Al'shin, and D. N. Astrov. 38(4), 789–93 (Apr. 1974); CPM-7502X0149

Atsarkin, V. A.—Low-frequency paramagnetic susceptibility under conditions of shift of the spin-spin temperature —V. A. Atsarkin. 37(3), 552–6 (Sep. 1973); CPM-7406X1560

Aukhadeev, F. L.—Nuclear relaxation in SrF_2 —F. L. Aukhadeev, I. I. Valeev, and V. A. Skrebnev. 37(5), 857–8 (Nov. 1973); CPM-7410X0197

—Proton relaxation in dilute rare-earth ethyl sulfates —I. I. Valeev, V. A. Skrebnev, and F. L. Aukhadeev. 38(3), 593–6 (Mar. 1974); CPM-7411X0973

Avdeeva, G. M.—Expansion of the equation of state in the $(4-\epsilon)$ -dimensional Heisenberg model —G. M. Avdeeva. 37(2), 377–82 (Aug. 1973); CPM-7404E0631

B

Babichenko, V. S.—High density bose gas with strong attraction between the particles —V. S. Babichenko. 37(2), 311–6 (Aug. 1973); CPM-7404E0565

Babykin, M. V.—Polarization spectroscopic analysis of noise produced in annihilation of oppositely moving magnetic fields — M. V. Babykin, A. I. Zhuzhunashvili, E. A. Oks, V. V. Shapkin, and G. V. Sholin. 38(1), 86–92 (Jan. 1974); CPM-7405F0086

Baĭdakov, V. G.—Attainable overheating of liquid argon —V. G. Baĭdakov, V. P. Skripov, and A. M. Kaverin. 38(3), 557–60 (Mar. 1974); CPM-7411X0937

Baĭkov, Yu. M.—Isotopic equilibrium in a hydrogen plus alkali–metal hydroxide system —Yu. M. Baĭkov and G. Ya. Ryskin. 38(3), 628–9 (Mar. 1974); CPM-7411X1008

Bakaĭ, A. S.—Wave excitation by light and by a homogeneous alternating magnetic field —A. S. Bakaĭ and G. G. Sergeeva. 38 (4), 840–6 (Apr. 1974); CPM-7502X0200

—Control of instability development in multibeam systems —V. D. Fedorchenko, Yu. P. Mazalov, A. S. Bakaĭ, and B. N. Rutkevich. 38(6), 1111–6 (Jun. 1974)

Bakanas, R. K.—Fine structure of cyclotron–phonon resonance lines —R. K. Bakanas, I. B. Levinson, and A. Yu. Matulis. 37(3), 541–4 (Sep. 1973); CPM-7406X1549

Baklanov, E. V.—Resonance fluorescence in a strong monochromatic field —E. V. Baklanov. 38(6), 1100–4 (Jun. 1974)

Balagurov, B. Ya.—Theory of "diffuse" phase transitions —B. Ya. Balagurov and V. G. Vaks. 38(4), 799–808 (Apr. 1974); CPM-7502X0159

—Random walks of a particle on lattices with traps —B. Ya. Balagurov and V. G. Vaks. 38(5), 968–71 (May 1974)

Balakhonov, N. F.—Spin waves in an Heisenberg ferromagnetic substance with single–ion anisotropy —M. P. Kashchenko, N. F. Balakhonov, and L. V. Kurbatov. 37(1), 201–4 (Jul. 1973); CPM-7401D0903

Balev, O. G.—Instability of transverse electromagnetic waves in a drifting electron–hole plasma —O. G. Balev and I. I. Boĭko. 37(6), 1099–102 (Dec. 1973); CPM-7412X0147

Band, I. M.—Investigation of the electronic mechanism of the isomorphic phase transition in cerium —V. A. Shaburov, I. M. Band, A. I. Grushko, T. B. Mezentseva, E. V. Petrovich, Yu. P. Smirnov, A. E. Sovestnov, O. I. Sumbaev, M. B. Trzhaskovskaya, and I. A. Markova. **38**(3), 573–81 (Mar. 1974); CPM-7411X0953

Baran, N. P.—Dynamics of the stationary triple electron–nucleus–nuclear resonance —N. P. Baran, A. B. Brik, and S. S. Ishchenko. **37**(2), 357–60 (Aug. 1973); CPM-7404E0611

Baranov, S. A.—New data on the alpha decay of Cr^{249} —S. A. Baranov, V. M. Shatinskiĭ, V. M. Kulakov, and Yu. F. Rodionov. **37**(6), 993 (Dec. 1973); CPM-7412X0041

Barenblatt, G. I.—On the theory of self–similar degeneracy of homogeneous isotropic turbulence —G. I. Barenblatt and A. A. Gavrilov. **38**(2), 399–402 (Feb. 1974); CPM-7405F0617

Bar'yakhtar, V. G.—Electron–electron collisions and the electric conductivity of metals at low temperatures —A. I. Akhiezer, I. A. Akhiezer, and V. G. Bar'yakhtar. **38**(1), 167–8 (Jan. 1974); CPM-7405F0167

—Damping of spin waves in antiferromagnetic substances with magnetic anisotropy of the "easy plane" type —V. G. Bar'yakhtar, V. L. Sobolev, and A. G. Kvirikadze. **38**(2), 392–8 (Feb. 1974); CPM-7405F0610

Baryshevskiĭ, V. G.—Effect of nuclear spin on the exchange line shift in optically pumped gases —V. G. Baryshevskiĭ. **37**(4), 605–9 (Oct. 1973); CPM-7407X1347

—Theory of the interaction of atoms (muonium, positronium) with magnetized substances —V. G. Baryshevskiĭ and A. V. Ivashin. **38**(4), 730–2 (Apr. 1974); CPM-7502X0090

Bashkin, A. S.—Dips in emission lines of preliminarily polarized molecular (atomic) beams —A. S. Bashkin, A. N. Oraevskiĭ, and A. E. Sakharov. **38**(3), 454–8 (Mar. 1974); CPM-7411X0834

Baskin, É. M.—Theory of field effect in metallic films —É. M. Baskin and M. V. Éntin. **37**(2), 346–50 (Aug. 1973); CPM-7404E0600

Basov, N. G.—Electric ionization lasers —N. G. Basov, É. M. Belenov, V. A. Danilychev, O. M. Kerimov, I. B. Kovsh, A. S. Podsosonnyĭ, and A. F. Suchkov. **37**(1), 58–64 (Jul. 1973); CPM-7401D0760

—Stimulation of chemical reactions by laser radiation —N. G. Basov, E. M. Belenov, E. P. Markin, A. N. Oraevskiĭ, and A. V. Pankratov. **37**(2), 247–52 (Aug. 1973); CPM-7404E0501

—Direct observation of the picosecond structure of radiation pulses from a mode–locked neodymium laser —N. G. Basov, M. M. Butslov, P. G. Kryukov, Yu. A. Matveev, E. A. Smirnova, B. M. Stepanov, S. D. Fanchenko, S. V. Chekalin, and R. V. Chikin. **38**(3), 449–53 (Mar. 1974); CPM-7411X0829

—Nonequilibrium vibrational kinetics of molecules in the presence of the field of resonant laser emission —N. G. Basov, A. N. Oraevskiĭ, A. A. Stepanov, and V. A. Shcheglov. **38**(5), 918–26 (May 1974)

Batanov, V. A.—Spectral diagnostics of the plasma plume produced in intense metal evaporation under laser radiation —V. A. Batanov, V. A. Bogatyrev, N. K. Sukhodrev, and V. B. Fedorov. **37**(3), 419–23 (Sep. 1973); CPM-7406X1427

Batrak, A. G.—Tunnel spectra of organic solvents —N. I. Bogatina, I. K. Yanson, B. I. Verkin, and A. G. Batrak. **38**(6), 1162–5 (Jun. 1974)

Bazhan, A. N.—The weak ferromagnetism of NiF_2 —A. S. Borovik–Romanov, A. N. Bazhan, and N. M. Kreĭnes. **37**(4), 695–702 (Oct. 1973); CPM-7407X1437

—Magnetic susceptibility and weak ferromagnetism of NiF_2 at T=4.2°K —A. N. Bazhan. **38**(6), 1238–41 (Jun. 1974)

Belavin, A. A.—Wilson's method in the static model of the nucleon —A. A. Belavin and M. A. Yurishchev. **37**(2), 208–10 (Aug. 1973); CPM-7404E0462

Belenov, É. M.—Electric ionization lasers —N. G. Basov, É. M. Belenov, V. A. Danilychev, O. M. Kerimov, I. B. Kovsh, A. S. Podsosonnyĭ, and A. F. Suchkov. **37**(1), 58–64 (Jul. 1973); CPM-7401D0760

—Stimulation of chemical reactions by laser radiation —N. G. Basov, E. M. Belenov, E. P. Markin, A. N. Oraevskiĭ, and A. V. Pankratov. **37**(2), 247–52 (Aug. 1973); CPM-7404E0501

Beletskiĭ, V. L.—Dispersion of sound velocity and the electron relaxation time in bismuth and antimony —A. P. Korolyuk, M. A. Obolenskiĭ, and V. I. Beletskiĭ. **38**(5), 979–82 (May 1974)

Belevtsev, B. I.—Connection between the superconducting properties and the structure of "amorphous" low–temperature bismuth films —B. I. Belevtsev, Yu. F. Komnik, and L. A. Yatsuk. **38**(6), 1225–30 (Jun. 1974)

Belousova, I. M.—Accumulation of iodine molecules in flash photolysis of CF_3I and n–C_3F_7I vapor —I. M. Belousova, N. G. Gorshkov, O. B. Danilov, V. Yu. Zalesskiĭ, and I. L. Yachnev. **38**(2), 254–7 (Feb. 1974); CPM-7405F0472

—Photodissociative I^{127} laser in a magnetic field —I. M. Belousova, B. D. Bobrov, V. M. Kiselev, V. N. Kurzenkov, and P. I. Krepostnov. **38**(2), 258–63 (Feb. 1974); CPM-7405F0476

Belov, K. P.—Magnetic anisotropy of the uranium compounds UAsS and UAsSe —K. P. Belov, A. S. Dmitrievskii, A. Zygmunt, R. Z. Levitin, and V. Trzebiatowski. **37**(2), 297–8 (Aug. 1973); CPM-7404E0551

—Investigation of magnetic properties of monocrystals of the uranium compounds U_3P_4 and U_3As_4 in strong fields —K. P. Belov, Z. Genke, A. S. Dmitrievskiĭ, R. Z. Levitin, and W. Trzebiatowski. **37**(4), 686–8 (Oct. 1973); CPM-7407X1428

—Magnetic properties of compounds of rare–earth metals with iron, of the type RF_3 —K. P. Belov, S. A. Nikitin, A. M. Bisliev, E. M. Savitskiĭ, V. F. Terekhova, and V. E. Kolesnichenko. **37**(6), 1086–8 (Dec. 1973); CPM-7412X0134

—Specific heat of the antiferromagnetic garnet $Ca_3Mn_2Ge_3O_{12}$ —K. P. Belov, T. V. Valyanskaya, L. G. Mamsurova, and V. I. Sokolov. **38**(3), 561–4 (Mar. 1974); CPM-7411X0941

Belov, V. F.—Magnetic structure and localization of Co^{2+} and Fe^{2+} ions in hexagonal ferrites —V. F. Belov, T. A. Khimich, M. N. Shipko, I. S. Zheludev, E. V. Korneev, and N. S. Ovanesyan. **37**(6), 1089–95 (Dec. 1973); CPM-7412X0137

Belova, V. M.—Magnetocaloric effect in a superparamagnet —V. M. Belova, V. I. Nikolaev, and V. M. Stuchebnikov. **37**(5), 881–2 (Nov. 1973); CPM-7410X0221

Belovol, V. S.—Influence of a magnetic field on the crystal structure of dypsprosium, III —V. A. Finkel' and V. S. Belovol. **37**(1), 90–3 (Jul. 1973); CPM-7401D0792

—Effect of magnetic field on the crystal structure of terbium —V. A. Finkel' and V. S. Belovol. **38**(5), 963–7 (May 1974)

Belyakov, É. S.—Investigation of x–ray transition radiation in foamed plastic —A. I. Alikhanyan, É. S. Belyakov, M. P. Lorikyan, K. Jh. Makaryan, and K. K. Shikhlyarov. **38**(4), 663–5 (Apr. 1974); CPM-7502X0023

Berdennikova, E. V.—Anomalous magnetooptical properties of bismuth–containing iron garnets —G. S. Krinchik, V. A. Krylova, E. V. Berdennikova, and R. A. Petrov. **38**(2), 354–6 (Feb. 1974); CPM-7405F0572

Berdyev, A. A.—Absorption and dispersion of ultrasound and hypersound in glycerine —A. A. Berdyev, V. A. Lysenko, and B. Khemraev. **38**(3), 515–6 (Mar. 1974); CPM-7411X0895

Berestov, A. T.—The equation of state and the isochoric specific heat near the critical points of liquids —A. T. Berestov, M. Sh. Giterman, and N. G. Shmakov. **37**(6), 1128–32 (Dec. 1973); CPM-7412X0176

Berezhetskaya, N. K.—Frequency dependence of multiphoton ionization of Xe and Kr atoms —D. T. Alimov, N. K. Berezhetskaya, G. A. Delone, and N. B. Delone. **37**(4), 599–601 (Oct. 1973); CPM-7407X1341

Berezin, P. D.—Orienting effect of an electric field on nematic liquid crystals —P. D. Berezin, I. N. Kompanets, V. V. Nikitin, and S. A. Pikin. **37**(2), 305–8 (Aug. 1973); CPM-7404E0559

Berezinskiĭ, V. L.—Thermodynamics of layered isotropic magnets at low temperatures —V. L. Berezinskiĭ and A. Ya. Blank. **37**(2), 369–76 (Aug. 1973); CPM-7404E0623

—Kinetics of a quantum particle in a one–dimensional random potential —V. L. Berezinskiĭ. **38**(3), 620–7 (Mar. 1974); CPM-7411X1000

Bereznyak, P. A.—Influence of resonance charge exchange on the resolution and contrast of a field–ion image —P. A. Bereznyak and I. M. Mikhaĭlovskiĭ. **38**(2), 233–5 (Feb. 1974); CPM-7405F0451

Berkovits, V. L.—Optical orientation in a system of electrons and lattice nuclei in semiconductors. Experiment —V. L. Berkovits, A. I. Ekimov, and V. I. Safarov. **38**(1), 169–76 (Jan. 1974); CPM-7405F0169

Berozashvili, Yu. N.—Spontaneous electroabsorption in cadmium telluride and gallium arsenide —R. M. Akopyan, Yu. N. Berozashvili, A. V. Dundua, and D. Sh. Lordkipanidze. **38**(5), 1003–7 (May 1974)

Beryuleva, N. S.—Nonlinear interaction of space-charge waves with trapped electrons —A. A. Ivanov, S. M. Korshunov, N. S. Beryuleva, and S. P. Tarasov. **38**(5), 927–30 (May 1974)

Bestgen, W.—Fluctuation theory of the two-dimensional mixed state in type I superconductors —A. F. Andreev and W. Bestgen. 37(5), 942–9 (Nov. 1973); CPM-7410X0282

—Paramagnetic effect of the surface "mixed" state in type-I superconductors —W. Bestgen. **38**(5), 1048–51 (May 1974)

Beterov, I. M.—Spectroscopy of two-quantum transitions in a gas near resonances —I. M. Beterov, Yu. A. Matyugin, and V. P. Chebotaev. 37(5), 756–63 (Nov. 1973); CPM-7410X0096

Bezuglyĭ, E. V.—Influence of proximity effect on the thermodynamic and magnetic properties of multilayer superconductors —V. P. Galaĭko and E. V. Bezuglyĭ. **38**(5), 1013–7 (May 1974)

Bilen'kaya, S. I.—Structure functions of deep inelastic ep scattering —S. I. Bilen'kaya, S. M. Bilen'kiĭ, Yu. M. Kazarinov, and L. I. Lapidus. **38**(5), 874–8 (May 1974)

Bilen'kiĭ, S. M.—Structure functions of deep inelastic ep scattering —S. I. Bilen'kaya, S. M. Bilen'kiĭ, Yu. M. Kazarinov, and L. I. Lapidus. **38**(5), 874–8 (May 1974)

Bir, G. L.—Optical orientation of excitons in uniaxial crystals. Large exchange splitting —G. L. Bir and G. E. Pikus. 37(6), 1116–21 (Dec. 1973); CPM-7412X0164

Bisliev, A. M.—Magnetic properties of compounds of rare-earth metals with iron, of the type RF_3 —K. P. Belov, S. A. Nikitin, A. M. Bisliev, E. M. Savitskiĭ, V. F. Terekhova, and V. E. Kolesnichenko. 37(6), 1086–8 (Dec. 1973); CPM-7412X0134

Blank, A. Ya.—Thermodynamics of layered isotropic magnets at low temperatures —V. L. Berezinskiĭ and A. Ya. Blank. 37(2), 369–76 (Aug. 1973); CPM-7404E0623

Blinov, E. V.—Optical orientation of metastable He^3 atoms and its influence on the electron density and radiation emitted by helium atoms in a plasma —R. A. Zhitnikov, E. V. Blinov, and L. S. Vlasenko. 37(1), 53–7 (Jul. 1973); CPM-7401D0755

Bluschke, A.—Susceptibility of copper–nickel alloys —V. E. Rode, A. Bluschke, B. N. Krainov, and A. I. Leĭchenko. 37(2), 280–2 (Aug. 1973); CPM-7404E0534

Bobrov, B. D.—Photodissociative I^{127} laser in a magnetic field —I. M. Belousova, B. D. Bobrov, V. M. Kiselev, V. N. Kurzenkov, and P. I. Krepostnov. 38(2), 258–63 (Feb. 1974); CPM-7405F0476

Bodganov, A. V.—The eikonal method in the three-body problem —G. V. Dubrovskiĭ and A. V. Bodganov. 37(5), 801–4 (Nov. 1973); CPM-7410X0141

Bogatina, N. I.—Tunnel spectra of organic solvents —N. I. Bogatina, I. K. Yanson, B. I. Verkin, and A. G. Batrak. **38**(6), 1162–5 (Jun. 1974)

Bogatyrev, V. A.—Spectral diagnostics of the plasma plume produced in intense metal evaporation under laser radiation —V. A. Batanov, V. A. Bogatyrev, N. K. Sukhodrev, and V. B. Fedorov. 37(3), 419–23 (Sep. 1973); CPM-7406X1427

Bogdanova, Kh. G.—Study of phase transitions in KD_3PO_4 single crystals by the acoustic magnetic resonance technique —Kh. G. Bogdanova, Yu. V. Vladimirtsev, V. A. Golenishchev-Kutuzov, and U. Kh. Kopvillem. **38**(3), 505–8 (Mar. 1974); CPM-7411X0885

Bogoyavlenskiĭ, O. I.—Singularities of the cosmological model of the Bianchi IX type according to the qualitative theory of differential equations —O. I. Bogoyavlenskiĭ and S. P. Novikov. 37(5), 747–55 (Nov. 1973); CPM-7410X0087

Boĭko, I. I.—Instability of transverse electromagnetic waves in a drifting electron-hole plasma —O. G. Balev and I. I. Boĭko. 37(6), 1099–102 (Dec. 1973); CPM-7412X0147

Boĭko, V. V.—Temperature dependence of the probability for scattering of charge carriers in molybdenum and tungsten —V. V. Boĭko, V. F. Gantmakher, and V. A. Gasparov. **38**(3), 604–7 (Mar. 1974); CPM-7411X0984

Bokshtein, B. S.—Mössbauer investigation of the relation between the electron structure and the diffusion properties of impurity atoms —B. S. Bokshteĭn and A. A. Zhukhovitskiĭ. 37(1), 88–9 (Jul. 1973); CPM-7401D0790

—Study of the Debye-Waller factor near the temperature of a phase transition of the first kind in cobalt —B. S. Bokshtein, Yu. B. Voĭtkovskiĭ, G. S. Nikol'skiĭ, and I. M. Razumovskiĭ. 37(2), 283–4 (Aug. 1973); CPM-7404E0537

Bolshakov, É. F.—Thin layers in acoustics and optics. changes in the transmission and reflection of sound and light on creation of a thin gas layer on the surface of a body in a liquid —G. A. Askar'yan, É. F. Bolshakov, E. Ya. Golts, and V. P. Logvinenko. 37(4), 587–9 (Oct. 1973); CPM-7407X1329

Bol'shov, L. A.—Phase transitions in a monolayer on the surface of a metal —L. A. Bol'shov and P. Napartovich. 37(4), 713–7 (Oct. 1973); CPM-7407X1455

Bonch-Bruevich, A. M.—Investigation of stimulated four-photon parametric scattering of laser radiation in alkali-metal vapor —A. M. Bonch-Bruevich, S. G. Przhibelskiĭ, V. A. Khodovoĭ, and V. V. Khromov. **38**(1), 30–6 (Jan. 1974); CPM-7405F0030

Bondar, V. M.—Effect of the multivalley structure of the conduction band on helical instability in the electron-hole plasma of silicon —V. M. Bondar, V. V. Vladimirov, N. I. Kononenko, O. G. Sarbeĭ, and A. I. Shchedrin. **38**(3), 542–4 (Mar. 1974); CPM-7411X0922

Bondarenko, I. E.—Influence of electrically active impurities on the mobility of separate dislocations in germanium —I. E. Bondarenko, V. N. Erofeev, and V. I. Nikitenko. 37(6), 1109–15 (Dec. 1973); CPM-7412X0157

Bondarenko, V. A.—Low frequency instabilities in a linear plasma betatron —E. I. Lutsenko, L. M. Kontsevoĭ, V. A. Bondarenko, and N. D. Sereda. 37(3), 424–8 (Sep. 1973); CPM-7406X1432

Bondarev, V. N.—Mobility of positive ions in He^3–He^4 solutions —V. N. Bondarev and I. Z. Fisher. **38**(3), 597–9 (Mar. 1974); CPM-7411X0977

Borman, V. D.—Kinetic phenomena in a Knudsen gas with rotational degrees of freedom —V. D. Borman, L. A. Maksimov, B. I. Nikolaev, and V. I. Troyan. 37(2), 269–73 (Aug. 1973); CPM-7404E0523

Borovich, B. L.—Photochemical decomposition waves —B. L. Borovich, V. S. Zuev, and O. N. Krokhin. 37(4), 602–4 (Oct. 1973); CPM-7407X1344

—Similarity of photodissociation waves and experimental determination of the primary period of the photochemical process —B. L. Borovich, V. Ya. Karpov, N. I. Kozlov, and Yu. Yu. Stoĭlov. 37(4), 616–8 (Oct. 1973); CPM-7407X1358

Borovik-Romanov, A. S.—The weak ferromagnetism of NiF_2 —A. S. Borovik-Romanov, A. N. Bazhan, and N. M. Kreĭnes. 37(4), 695–702 (Oct. 1973); CPM-7407X1437

—Magnetic birefringence of light in antiferromagnetic transition-metal fluorides —A. S. Borovik-Romanov, N. M. Kreĭnes, A. A. Pankov, and M. A. Talalaev. 37(5), 890–6 (Nov. 1973); CPM-7410X0230

Bozhko, V. P.—Temperature effects in quadrupole interaction in NbHf alloys —V. A. Klyucharev, V. P. Bozhko, and A. S. Bulatov. 37(4), 678–80 (Oct. 1973); CPM-7407X1420

Bozhkov, A. I.—Effect of optical action on the "surface elasticity" of solid media —A. I. Bozhkov and F. V. Bunkin. 37(1), 156–8 (Jul. 1973); CPM-7401D0858

Braginskiĭ, V. B.—Electromagnetic detectors of gravitational waves —V. B. Braginskiĭ, L. P. Grishchuk, A. G. Doroshkevich, Ya. B. Zel'dovich, I. D. Novikov, and M. V. Sazhin. **38**(5), 865–9 (May 1974)

Braun, M.A.—Recoil corrections in a strong nuclear field—M. A. Braun—37(2), 211–5 (Aug. 1973); CPM-7404E0465

Brazovskiĭ, S. A.—Excitonic insulator in magnetic and electric fields —S. A. Brazovskiĭ. 37(2), 361–5 (Aug. 1973); CPM-7404E0615

Breizman, B. N.—Kinetics of stimulated scattering of Langmuir waves by plasma ions —B. N. Breizman, V. E. Zakharov, and S. L. Musher. 37(4), 658–65 (Oct. 1973); CPM-7407X1400

Bresler, M. S.—Influence of hydrostatic pressure on the splitting of the Landau levels in tellurium —V. B. Anzin, M. S. Bresler, E. S. Itskevich, Yu. V. Kosichkin, V. A. Sukhoparov, A. N. Tolmachev, and I. I. Farbshtein. **38**(4), 755–8 (Apr. 1974); CPM-7502X0115

Brik, A. B.—Dynamics of the stationary triple electron–nucleus–nuclear resonance —N. P. Baran, A. B. Brik, and S. S. Ishchenko. 37(2), 357–60 (Aug. 1973); CPM-7404E0611

Budker, G. I.—Experiments on plasma confinement in a magnetic multimirror trap —G. I. Budker, V. V. Danilov, E. P. Kruglyakov, D. D. Ryutov, and E. V. Shunko. 38(2), 276–82 (Feb. 1974); CPM-7405F0494

Buishvili, L. L.—The role of the dipole–dipole reservoir in electron–nuclear double resonance at distant nuclei —L. L. Buishvili, M. D. Zviadadze, and N. P. Fokina. **38**(6), 1135–8 (Jun. 1974)

Bukhbinder, I. L.—Spin diffusion in nuclear quadrupole resonance —I. L. Bukhbinder and A. R. Kessel'. **38**(4), 745–9 (Apr. 1974); CPM-7502X0105

Bulaevskiĭ, L. N.—Magnetic properties of layered supreconductors with weak interaction between the layers —L. N. Bulaevskiĭ. **37** (6), 1133–6 (Dec. 1973); CPM-7412X0181
—Inhomogeneous state and the anisotropy of the upper critical field in layered superconductors with Josephson layer interaction —L. N. Bulaevskiĭ. **38**(3), 634–9 (Mar. 1974); CPM-7411X1014
Bulanov, V. A.—Tensile strength of liquid hydrogen —V. A. Akulichev and V. A. Bulanov. **38**(2), 329–30 (Feb. 1974); CPM-7405F0547
Bulatov, A. S.—Temperature effects in quadrupole interaction in NbHf alloys —V. A. Klyucharev, V. P. Bozhko, and A. S. Bulatov. **37**(4), 678–80 (Oct. 1973); CPM-7407X1420
Bulgakov, A. A.—Contribution to the theory of superheat instability in semiconductors —A. A. Bulgakov, É. A. Kaner, S. I. Khankina, and V. M. Yakovenko. **37**(1), 171–5 (Jul. 1973); CPM-7401D0873
Bunkin, F. V.—Effect of optical action on the "surface elasticity" of solid media —A. I. Bozhkov and F. V. Bunkin. **37**(1), 156–8 (Jul. 1973); CPM-7401D0858
—Optical breakdown of gases induced by the thermal explosion of suspended macroscopic particles —F. V. Bunkin and V. V. Savranskiĭ. **38**(6), 1091–6 (Jun. 1974)
Burmakin, V. A.—Stabilization of microdomain configurations in two–layer magnetic films —N. M. Salanskiĭ, V. A. Serëdkin, V. A. Burmakin, and A. V. Nabatov. **38**(5), 1011–2 (May 1974)
Burshtëĭn, A. I.—Collisional averaging of the stark and Zeeman spectrum structure —A. I. Burshtëĭn and G. I. Smirnov. **38**(6), 1085–90 (Jun. 1974)
Butslov, M. M.—Direct observation of the picosecond structure of radiation pulses from a mode–locked neodymium laser —N. G. Basov, M. M. Butslov, P. G. Kryukov, Yu. A. Matveev, E. A. Smirnova, B. M. Stepanov, S. D. Fanchenko, S. V. Chekalin, and R. V. Chikin. **38**(3), 449–53 (Mar. 1974); CPM-7411X0829
Byalko, A. V.—Deviation of an expanding universe that is isotropic in the mean from the Friedmann universe —A. V. Byalko. **38**(3), 421–6 (Mar. 1974); CPM-7411X0801
Bychkov, Yu. A.—Frequency dependence of the conductivity of one–dimensional systems —Yu. A. Bychkov. **38**(1), 209–13 (Jan. 1974); CPM-7405F0209
Bykovskaya, L. A.—Fine structure of luminescence spectra of laser–excited organic molecules and the nature of the broad spectral bands of solid solutions —R. I. Personov, E. I. Al'shitz, L. A. Bykovskaya, and B. M. Kharlamov. **38**(5), 912–7 (May 1974)
Bykovskiĭ, Yu. A.—Alternating oscillations in the photocurrent spectra of nonequuilibrium photoelectrons in p–type InSb subjected to quantizing magnetic fields —A. S. Aleksandrov, Yu. A. Bykovskiĭ, V. F. Elesin, E. A. Protasov, and A. G. Rodionov. **37** (1), 120–6 (Jul. 1973); CPM-7401D0822

C

Chalyĭ, A. V.—Critical fluctuations in external fields —E. L. Lakoza, V. M. Sysoev, and A. V. Chalyĭ. **38**(2), 298–303 (Feb. 1974); CPM-7405F0516
Chaplik, A. V.—On the theory of vibration–rotation excitation of molecules —R. Z. Vitlina and A. V. Chaplik. **38**(2), 224–7 (Feb. 1974); CPM-7405F0442
—Surface scattering in electron tunneling —A. V. Chaplik and M. V. Éntin. **38**(6), 1251–3 (Jun. 1974)
Chebotaev, V. P.—Spectroscopy of two–quantum transitions in a gas near resonances —I. M. Beterov, Yu. A. Matyugin, and V. P. Chebotaev. **37**(5), 756–63 (Nov. 1973); CPM-7410X0096
Chechetkin, V. R.—Rate of penetration of a magnetic flux into type–II superconductors —B. V. Petukhov and V. R. Chechetkin. **38**(4), 827–9 (Apr. 1974); CPM-7502X0187
Chekalin, S. V.—Direct observation of the picosecond structure of radiation pulses from a mode–locked neodymium laser —N. G. Basov, M. M. Butslov, P. G. Kryukov, Yu. A. Matveev, E. A. Smirnova, B. M. Stepanov, S. D. Fanchenko, S. V. Chekalin, and R. V. Chikin. **38**(3), 449–53 (Mar. 1974); CPM-7411X0829
Cheremisin, S. M.—Scattering of electrons in bismuth —S. M. Cheremisin. **38**(4), 779–82 (Apr. 1974); CPM-7502X0139
Cheremushkina, A. V.—Anisotropy of Galvanomagnetic effects in single–crystal cobalt —E. N. Kondorskiĭ, O. S. Galkina, V. I. Ivanovskiĭ, A. V. Cheremushkina, and U. T. Usarov. **38**(5), 977–8 (May 1974)
Cherepkov, N. A.—Angular distribution of photoelectrons with a given spin orientation —N. A. Cherepkov. **38**(3), 463–9 (Mar. 1974); CPM-7411X0843
Cherkasov, F. G.—Conduction electron spin echo in metals —V. A. Zhikharev, A. R. Kessel', É. G. Kharakhash'yan, F. G. Cherkasov, and K. K. Shvarts. **37**(4), 689–94 (Oct. 1973); CPM-7407X1431
Chernenko, V. M.—Electron scattering near the focus of a laser —V. M. Chernenko. **37**(6), 995–1000 (Dec. 1973); CPM-7412X0043
Chernikova, L. A.—Magnetocaloric effect in compounds of rare–earth metals with iron —S. A. Nikitin, E. V. Talalaeva, L. A. Chernikova, and A. S. Andreenko. **38**(5), 1028–30 (May 1974)
Chernoplekov, N. A.—Alteration of the superconducting properties of vanadium by introduction of tantalum impurity atoms —N. A. Chernoplekov, G. Kh. Panova, B. N. Samoĭlov, and A. A. Shikov. **37**(1), 102–6 (Jul. 1973); CPM-7401D0804
Chernozatonskiĭ, L. A.—Phonon transition radiation —V. M. Levin, V. I. Pustovoit, and L. A. Chernozatonskiĭ. **37**(5), 909–13 (Nov. 1973); CPM-7410X0249
Chigvinadze, Dzh. G.—Effect of surface and volume defects on the dissipative processes in type–II superconductors —Dzh. G. Chigvinadze. **38**(5), 960–2 (May 1974)
Chikhachev, A. S.—Universality of the power spectra of relativistic electrons produced in a turbulent plasma —Yu. A. Nikolaev, V. N. Tsytovich, and A. S. Chikhachev. **37**(3), 445–8 (Sep. 1973); CPM-7406X1453
Chikin, R. V.—Direct observation of the picosecond structure of radiation pulses from a mode–locked neodymium laser —N. G. Basov, M. M. Butslov, P. G. Kryukov, Yu. A. Matveev, E. A. Smirnova, B. M. Stepanov, S. D. Fanchenko, S. V. Chekalin, and R. V. Chikin. **38**(3), 449–53 (Mar. 1974); CPM-7411X0829
Chirkin, A. S.—Spatial field and intensity correlation functions of laser radiation —A. G. Arutyunyan, S. A. Akhmanov, Yu. D. Golyaev, V. G. Tunkin, and A. S. Chirkin. **37**(5), 764–71 (Nov. 1973); CPM-7410X0104
Chukhovskiĭ, F. N.—Dynamic scattering of x–rays by dislocations —F. N. Chukhovskiĭ and A. A. Shtol'berg. **37**(3), 525–9 (Sep. 1973); CPM-7406X1533
Churilov, S. M.—Amplification of electromagnetic and gravitational waves scattered by a rotating "black hole" —A. A. Starobinskiĭ and S. M. Churilov. **38**(1), 1–5 (Jan. 1974); CPM-7405F0001

D

Danilov, O. B.—Accumulation of iodine molecules in flash photolysis of CF_3I and $n\text{–}C_3F_7I$ vapor —I. M. Belousova, N. G. Gorshkov, O. B. Danilov, V. Yu. Zalesskiĭ, and I. L. Yachnev. **38**(2), 254–7 (Feb. 1974); CPM-7405F0472
Danilov, V. V.—Experiments on plasma confinement in a magnetic multimirror trap —G. I. Budker, V. V. Danilov, E. P. Kruglyakov, D. D. Ryutov, and E. V. Shunko. **38**(2), 276–82 (Feb. 1974); CPM-7405F0494
Danilova, N. P.—Static surface resistance of zinc in a magnetic field —Yu. P. Gaĭdukov and N. P. Danilova. **37**(3), 467–73 (Sep. 1973); CPM-7406X1475
—Magnetoresistance of filamentary cadmium single crystals at 4.2°K —Yu. P. Gaĭdukov and N. P. Danilova. **38**(4), 767–71 (Apr. 1974); CPM-7502X0127
Danilychev, V. A.—Electric ionization lasers —N. G. Basov, É. M. Belenov, V. A. Danilychev, O. M. Kerimov, I. B. Kovsh, A. S. Podsosonnyĭ, and A. F. Suchkov. **37**(1), 58–64 (Jul. 1973); CPM-7401D0760
Dedukh, L. M.—Polarization–optical investigation of magnetization processes near dislocations in yttrium iron garnet single crystals —V. K. Vlasko–Vlasov, L. M. Dedukh, and V. I. Nikitenko. **38**(1), 184–94 (Jan. 1974); CPM-7405F0184
Deigen, M. F.—Paramagnetic relaxation due to plasma oscillations of the current carriers —M. F. Deigen, L. A. Suslin, and L. Yu. Mel'nikov. **38**(4), 824–6 (Apr. 1974); CPM-7502X0184
Delone, G. A.—Frequency dependence of multiphoton ionization of Xe and Kr atoms —D. T. Alimov, N. K. Berezhetskaya, G. A. Delone, and N. B. Delone. **37**(4), 599–601 (Oct. 1973); CPM-7407X1341
—Cross sections for multiphoton ionization of alkali metal atoms —G. A. Delone, N. B. Delone, V. K. Zolotarev, N. L. Manakov, G. K. Piskova, and M. A. Tursunov. **38**(2), 236–8 (Feb. 1974); CPM-7405F0454
Delone, N. B.—Frequency dependence of multiphoton ionization of Xe and Kr atoms —D. T. Alimov, N. K. Berezhetskaya, G. A. Delone, and N. B. Delone. **37**(4), 599–601 (Oct. 1973); CPM-7407X1341

—Cross sections for multiphoton ionization of alkali metal atoms —G. A. Delone, N. B. Delone, V. K. Zolotarev, N. L. Manakov, G. K. Piskova, and M. A. Tursunov. 38(2), 236–8 (Feb. 1974); CPM-7405F0454

Demikhovskiĭ, V. Ya.—Nonlinear effects due to the propagation of sound and electromagnetic waves in conductors in a quantizing magnetic field —V. Ya. Demikhovskiĭ and A. P. Kopasov. 37(3), 512–5 (Sep. 1973); CPM-7406X1520

Demura, A. V.—Theory of Stark broadening of hydrogen lines in plasma —G. V. Sholin, A. V. Demura, and V. S. Lisitsa. 37(6), 1057–65 (Dec. 1973); CPM-7412X0105

Derbenev, Ya. S.—Polarization kinetics of particles in storage rings —Ya. S. Derbenev and A. M. Kondratenko. 37(6), 968–73 (Dec. 1973); CPM-7412X0016

Derebchinskiĭ, A. I.—Photoproduction of π mesons from C^{12} in the photon-energy range from 250 to 1200 MeV —N. V. Goncharov, A. I. Derebchinskiĭ, O. G. Konovalov, S. G. Tonapetyan, and V. M. Khvorostyan. 37(1), 38–40 (Jul. 1973); CPM-7401D0740

—Polarization of protons from the $\gamma+p\to\pi^0+p$ reaction produced by 692–1028 MeV photons at 90° in the center-of-mass system —N. V. Goncharov, A. I. Derebchinskiĭ, A. A. Zybalov, O. G. Konovalov, A. E. Tenishev, S. G. Tonapetyan, and V. M. Khvorostyan. 37(2), 205–7 (Aug. 1973); CPM-7404E0459

Deryagin, B. V.—A general theory for the formation of a new phase. Static cavitation in a nonvolatile liquid —B. V. Deryagin. 38(6), 1129–34 (Jun. 1974)

Dikman, S. M.—Theory of the anomalous skin effect in a plasma with a diffuse boundary —S. M. Dikman and B. E. Meierovich. 37(5), 835–43 (Nov. 1973); CPM-7410X0175

Dmitriev, N. A.—Allowance for correlation effects in narrow energy bands —N. A. Dmitriev, A. K. Zhitnik, and M. F. Sarry. 37(4), 710–2 (Oct. 1973); CPM-7407X1452

Dmitriev, S. G.—High-intensity electromagnetic wave in a cholesteric liquid crystal —S. G. Dmitriev. 38(6), 1231–2 (Jun. 1974)

Dmitrievskiĭ, A. S.—Magnetic anisotropy of the uranium compounds UAsS and UAsSe —K. P. Belov, A. S. Dmitrievskiĭ, A. Zygmunt, R. Z. Levitin, and V. Trzebiatowski. 37(2), 297–8 (Aug. 1973); CPM-7404E0551

—Investigation of magnetic properties of monocrystals of the uranium compounds U_3P_4 and U_3As_4 in strong fields —K. P. Belov, Z. Genke, A. S. Dmitrievskiĭ, R. Z. Levitin, and W. Trzebiatowski. 37(4), 686–8 (Oct. 1973); CPM-7407X1428

Do, Chan Kat—Theory of superconductivity in the presence of electron–hole pairing in semimetals at T=0 —A. I. Rusinov, Chan Kat Do, and Yu. V. Kopaev. 38(5), 991–8 (May 1974)

Doroshkevich, A. G.—The isotropization of homogeneous cosmological models —A. G. Doroshkevich, V. N. Lukash, and I. D. Novikov. 37(5), 739–46 (Nov. 1973); CPM-7410X0079

—Electromagnetic detectors of gravitational waves —V. B. Braginskiĭ, L. P. Grishchuk, A. G. Doroshkevich, Ya. B. Zel'dovich, I. D. Novikov, and M. V. Sazhin. 38(5), 865–9 (May 1974)

Dragunas, A. K.—"Anomalous" variation of the Mossbauer isomer shift of Te^{125} in defective diamond-like semiconductors —K. V. Makaryunas, A. K. Dragunas, and M. L. Adominaĭte. 37(3), 449–51 (Sep. 1973); CPM-7406X1457

Dubovka, G. T.—Effect of pressure on magnetic transformations in an iron–rhodium alloy —G. T. Dubovka. 38(6), 1140–3 (Jun. 1974)

Dubovoĭ, A. P.—Perturbation of a magnetized plasma by a rapidly moving charge —A. P. Dubovoĭ and A. M. Moskalenko. 37(1), 77–9 (Jul. 1973); CPM-7401D0779

Dubovtsev, I. A.—Phase modulation of Mössbauer spectra and the generation of ultrasound in metals by a radio–frequency field —I. A. Dubovtsev, P. S. Zyryanov, and N. P. Filippova. 38(3), 509–14 (Mar. 1974); CPM-7411X0889

Dubrovskiĭ, G. V.—The eikonal method in the three–body problem —G. V. Dubrovskiĭ and A. V. Bodganov. 37(5), 801–4 (Nov. 1973); CPM-7410X0141

Dundua, A. V.—Spontaneous electroabsorption in cadmium telluride and gallium arsenide —R. M. Akopyan, Yu. N. Berozashvili, A. V. Dundua, and D. Sh. Lordkipanidze. 38(5), 1003–7 (May 1974)

Dunin, S. Z.—Two–component charged Fermi liquid in a magnetic field —S. Z. Dunin and E. P. Fetisov. 37(1), 142–6 (Jul. 1973); CPM-7401D0844

D'yachkov, L. G.—Effect of resonances in elastic scattering on the bremsstrahlung of electrons in an atomic field —L. G. D'yachkov, G. A. Kobzev, and G. É. Norman. 38(4), 697–700 (Apr. 1974); CPM-7502X0057

D'yakonov, M. I.—Optical orientation in a system of electrons and lattice nuclei in semiconductors. Theory —M. I. D'yakonov and V. I. Perel'. 38(1), 177–83 (Jan. 1974); CPM-7405F0177

Dykhne, A. M.—Resonance charge exchange in high density gases —R. S. Vitlina and A. M. Dykhne. 37(2), 260–2 (Aug. 1973); CPM-7404E0514

Dykman, M. I.—Quantum theory of nonlinear oscillators interacting with the medium —M. I. Dykman and M. A. Krivoglaz. 37(3), 506–11 (Sep. 1973); CPM-7406X1514

Dyshko, A. L.—On the multifocus structure of light beams in nonlinear media —A. L. Dyshko, V. N. Lugovoĭ, and A. M. Prokhorov. 38(4), 680–3 (Apr. 1974); CPM-7502X0040

Dyumin, N. E.—Absorption of first sound in liquid He^3 —N. E. Dyumin, B. N. Esel'son, and É. Ya. Rudavskiĭ. 38(1), 116–8 (Jan. 1974); CPM-7405F0116

Dzhamalov, R. D.—Nonlinear ion surface oscillations in a semi–restricted current–carrying plasma —E. A. Abu–Asali, B. A. Al'terkop, R. D. Dzhamalov, and A. A. Rukhadze. 37(6), 1034–6 (Dec. 1973); CPM-7412X0082

Dzhavakhishvili, D. I.—Transport phenomena in a completely ionized ultrarelativistic plasma —D. I. Dzhavakhishvili and N. L. Tsintsadze. 37(4), 666–71 (Oct. 1973); CPM-7407X1408

Dzhuraev, A. A.—Dependence of the asymmetry of negative muon decay electrons on the length of the hydrocarbon chain of alcohols and alkyl chlorides —A. A. Dzhuraev, V. S. Esveev, Yu. V. Obukhov, V. S. Roganov, M. V. Frontas'eva, and N. I. Kholodov. 37(6), 974–6 (Dec. 1973); CPM-7412X0022

Dzhurakulov, A.—Magnetic structure of copper–manganese alloys with exchange anisotropy —E. I. Kondorskiĭ, O. S. Galkina, and A. Dzhurakulov. 38(6), 1153–5 (Jun. 1974)

Dzyaloshinskiĭ, I. E.—Correlation functions for a one–dimensional Fermi system with long–range interaction (Tomonaga model) —I. E. Dzyaloshinskiĭ and A. I. Larkin. 38(1), 202–8 (Jan. 1974); CPM-7405F0202

E

Édel'man, V. S.—Shape of the electron Fermi surface of bismuth —V. S. Édel'man. 37(5), 875–80 (Nov. 1973); CPM-7410X0215

—Cyclotron resonance on nonextremal orbits —A. P. Volodin, M. S. Khaĭkin, and V. S. Édel'man. 38(5), 1052–6 (May 1974)

Édel'shteĭn, V. M.—Mobility of piezopolaron in the case of strong coupling —G. E. Volovik and V. M. Édel'shteĭn. 38(5), 972–6 (May 1974)

Éfros, A. L.—Localization of electrons in a magnetic field —B. I. Shklovskiĭ and A. L. Éfros. 37(6), 1122–7 (Dec. 1973); CPM-7412X0170

Egorov, B. N.—Size effect of kinetic coefficients in polycrystalline bismuth films —V. M. Abrosimov, B. N. Egorov, and M. A. Krykin. 37(1), 113–6 (Jul. 1973); CPM-7401D0815

Ekimov, A. I.—Optical orientation in a system of electrons and lattice nuclei in semiconductors. Experiment —V. L. Berkovits, A. I. Ekimov, and V. I. Safarov. 38(1), 169–76 (Jan. 1974); CPM-7405F0169

Elesin, V. F.—Alternating oscillations in the photocurrent spectra of nonequuilibrium photoelectrons in p–type InSb subjected to quantizing magnetic fields —A. S. Aleksandrov, Yu. A. Bykovskiĭ, V. F. Elesin, E. A. Protasov, and A. G. Rodionov. 37(1), 120–6 (Jul. 1973); CPM-7401D0822

—Electron kinetics and stationary generation in semiconductor lasers —V. M. Galitskiĭ and V. F. Elesin. 37(2), 351–6 (Aug. 1973); CPM-7404E0605

—Theory of superconductivity in systems with an inverse distribution —V. F. Elesin, Yu. V. Kopaev, and R. Kh. Timerov. 38(6), 1170–6 (Jun. 1974)

Elisenkov, F. A.—Unified formula for the inelastic differential scattering cross sections of atoms and determination of the excited–term parameters —F. A. Elisenkov and V. K. Nikulin. 37(1), 65–7 (Jul. 1973); CPM-7401D0767

El–Shazly, A. F. A.—Temperature dependence of the optical properties and the energy spectrum of zinc —R. G. Yarovaya, I. N. Shklyarevskiĭ, and A. F. A. El–Shazly. 38(2), 331–4 (Feb. 1974); CPM-7405F0549

Elyutin, P. V.—Bresmstrahlung effect in a strong radiation field —P. V. Elyutin. 38(6), 1097–9 (Jun. 1974)

Éntin, M. V.—Theory of field effect in metallic films —É. M. Baskin and M. V. Éntin. 37(2), 346–50 (Aug. 1973); CPM-7404E0600

—Surface scattering in electron tunneling —A. V. Chaplik and M. V. Éntin. 38(6), 1251–3 (Jun. 1974)

Eremenko, V. V.—Magnetic birefringence and the domain structure of antiferromagnetic cobalt carbonate —N. F. Kharchenko, V. V. Eremenko, and O. P. Tutakina. 37(4), 672–7 (Oct. 1973); CPM-7407X1414

—Exciton–magnon absorption of light in antiferromagnetic siderite — V. V. Eremenko, Yu. G. Litvinenko, A. A. Motornaya, V. I. Myatlik, and V. V. Shapiro. 38(3), 608–12 (Mar. 1974); CPM-7411X0988

Eremin, M. V.—Paramagnetic resonance of mixed chromium and iron triads —Yu. V. Yablokov, V. A. Gaponenko, M. V. Eremin, V. V. Zelentsov, and T. A. Zhemchuzhnikova. 38(5), 988–90 (May 1974)

Eremin, N. V.—A possibility of employing the shadow effect for studying the decay of quasistationary states —N. V. Eremin, Yu. V. Melikov, and A. F. Tulinov. 38(3), 433–4 (Mar. 1974); CPM-7411X0813

Ermakov, O. N.—Violation of P parity in the reaction $^{113}Cd(n,\gamma)^{114}Cd$ —Yu. G. Abov, O. N. Ermakov, and P. A. Krupchitskiĭ. 38(5), 870–3 (May 1974)

Ermanchenko, V. M.—Mode locking in gas lasers —S. A. Gonchukov, V. M. Ermanchenko, and E. D. Protsenko. 38(2), 239–42 (Feb. 1974); CPM-7405F0457

Erofeev, V. N.—Influence of electrically active impurities on the mobility of separate dislocations in germanium —I. E. Bondarenko, V. N. Erofeev, and V. I. Nikitenko. 37(6), 1109–15 (Dec. 1973); CPM-7412X0157

Erokhin, N. S.—Wave transformation in an inhomogeneous unstable plasma —N. S. Erokhin and S. S. Moiseev. 38(4), 712–9 (Apr. 1974); CPM-7502X0072

Erzinkyan, A. L.—Magnetic hyperfine interaction for Co^{60} in PdRhCo alloys —A. L. Erzinkyan, V. P. Parfenova, and Yu. N. Sokhanenkov. 37(3), 487–90 (Sep. 1973); CPM-7406X1495

Esel'son, B. N.—Spin diffusion in solid He^3–He^4 solutions —V. N. Grigor'ev, B. N. Esel'son, and V. A. Mikheev. 37(2), 309–10 (Aug. 1973); CPM-7404E0563

—Absorption of first sound in liquid He^3 —N. E. Dyumin, B. N. Esel'son, and É. Ya. Rudavskiĭ. 38(1), 116–8 (Jan. 1974); CPM-7405F0116

Esipov, V. S.—Effect of long-range forces on the phase transition in the two-dimensional model of an antiferromagnetic substance —V. S. Esipov. 38(4), 759–62 (Apr. 1974); CPM-7502X0119

Éstrin, É. I.—Phase transition induced in KCl by pressure at low temperatures —V. N. Laukhin, A. G. Rabin'kin, and É. I. Éstrin. 37(6), 1150–2 (Dec. 1973); CPM-7412X0198

Esveev, V. S.—Dependence of the asymmetry of negative muon decay electrons on the length of the hydrocarbon chain of alcohols and alkyl chlorides —A. A. Dzhuraev, V. S. Esveev, Yu. V. Obukhov, V. S. Roganov, M. V. Frontas'eva, and N. I. Kholodov. 37(6), 974–6 (Dec. 1973); CPM-7412X0022

Evstifeev, V. V.—Group and successive pair collisions in scattering of Cs^+ ions by tungsten single crystals —V. I. Veksler and V. V. Evstifeev. 37(2), 290–3 (Aug. 1973); CPM-7404E0544

F

Fadin, V. S.—Radiative corrections to bremsstrahlung at high energies —É. A. Kuraev, L. N. Lipatov, N. P. Merenkov, and V. S. Fadin. 38(6), 1076–8 (Jun. 1974)

Fain, V. M.—On the polarizability of tunneling defects —G. A. Andreev, V. I. Tal'yanskiĭ, and V. M. Fain. 37(3), 458–61 (Sep. 1973); CPM-7406X1466

Fainshtein, S. M.—Nonlinear ion–sound waves in a plasma with three–dimensional random inhomogeneities —V. V. Tamoĭkin and S. M. Fainshtein. 37(2), 257–9 (Aug. 1973); CPM-7404E0511

Faizullov, F. S.—Influence of saturation on the amplification of light in stimulated Brillouin scattering —V. I. Kovalev, V. I. Popovichev, V. N. Ragul'skiĭ, and F. S. Faizullov. 37(6), 1023–4 (Dec. 1973); CPM-7412X0071

Fal'ko, V. L.—Electromagnetic excitation of sound in alkali metals located in a magnetic field —É. A. Kaner and V. L. Fal'ko. 37(3), 516–20 (Sep. 1973); CPM-7406X1524

—Electromagnetic excitation of sound in a metal located in a magnetic field parallel to the surface —V. L. Fal'ko. 38(6), 1184–8 (Jun. 1974)

Fal'kovskiĭ, L. A.—The resistance of thin metallic samples —L. A. Fal'kovskiĭ. 37(5), 937–9 (Nov. 1973); CPM-7410X0277

Fanchenko, S. D.—Direct observation of the picosecond structure of radiation pulses from a mode–locked neodymium laser —N. G. Basov, M. M. Butslov, P. G. Kryukov, Yu. A. Matveev, E. A. Smirnova, B. M. Stepanov, S. D. Fanchenko, S. V. Chekalin, and R. V. Chikin. 38(3), 449–53 (Mar. 1974); CPM-7411X0829

Farbshteĭn, I. I.—Influence of hydrostatic pressure on the splitting of the Landau levels in tellurium —V. B. Anzin, M. S. Bresler, E. S. Itskevich, Yu. V. Kosichkin, V. A. Sukhoparov, A. N. Tolmachev, and I. I. Farbshteĭn. 38(4), 755–8 (Apr. 1974); CPM-7502X0115

Fedorchenko, V. D.—Control of instability development in multibeam systems —V. D. Fedorchenko, Yu. P. Mazalov, A. S. Bakaĭ, and B. N. Rutkevich. 38(6), 1111–6 (Jun. 1974)

Fedorov, V. B.—Spectral diagnostics of the plasma plume produced in intense metal evaporation under laser radiation —V. A. Batanov, V. A. Bogatyrev, N. K. Sukhodrev, and V. B. Fedorov. 37(3), 419–23 (Sep. 1973); CPM-7406X1427

Fedorov, V. V.—Optical frequency modulation of electrons diffracted by a crystal —V. V. Fedorov, K. E. Kir'yanov, and A. I. Smirnov. 37(4), 737–8 (Oct. 1973); CPM-7407X1479

Fedosov, M. N.—Study of gravitational waves emitted by a rapidly rotating drop of a homogeneous gravitating liquid —M. N. Fedosov and V. P. Tsvetkov. 38(4), 641–2 (Apr. 1974); CPM-7502X0001

Fel'tsan, P. V.—Ultrasoft x–ray study of the s–ionization mechanism for noble gases —I. P. Zapesochnyĭ, I. G. Zhukov, and P. V. Fel'tsan. 38(4), 675–9 (Apr. 1974); CPM-7502X0035

Fetisov, E. P.—Two–component charged Fermi liquid in a magnetic field —S. Z. Dunin and E. P. Fetisov. 37(1), 142–6 (Jul. 1973); CPM-7401D0844

Filippova, N. P.—Phase modulation of Mössbauer spectra and the generation of ultrasound in metals by a radio–frequency field —I. A. Dubovtsev, P. S. Zyryanov, and N. P. Filippova. 38(3), 509–14 (Mar. 1974); CPM-7411X0889

Filonenko, N. N.—Statistical properties of the energy spectrum of "glancing" electrons with mixed classical trajectories —G. M. Zaslavskiĭ and N. N. Filonenko. 38(2), 317–23 (Feb. 1974); CPM-7405F0535

Finkel', V. A.—Influence of a magnetic field on the crystal structure of dypsprosium, III —V. A. Finkel' and V. S. Belovol. 37(1), 90–3 (Jul. 1973); CPM-7401D0792

—Effect of magnetic field on the crystal structure of terbium —V. A. Finkel' and V. S. Belovol. 38(5), 963–7 (May 1974)

Finkelberg, V. M.—High–temperature resistivity and the superconductivity of potassium and rubidium at high pressures — G. M. Gandelman, O. Yu. Itskovich, P. S. Kondratenko, I. P. Perstnev, and V. M. Finkelberg. 38(1), 111–5 (Jan. 1974); CPM-7405F0111

Firsov, O. B.—Calculation of the ground term $X^1\Sigma_g^+$ of the helium quasimolecular doubly–charged ion He_2^{++} by a simple method — T. M. Kereselidze and O. B. Firsov. 38(1), 49–50 (Jan. 1974); CPM-7405F0049

Fisher, I. Z.—Hydrodynamic asymptotic form of the rotational–motion correlation function of a molecule in a liquid — I. Z. Fisher, A. V. Zatovskiĭ, and N. P. Malomuzh. 38(1), 146–50 (Jan. 1974); CPM-7405F0146

—Mobility of positive ions in He^3–He^4 solutions —V. N. Bondarev and I. Z. Fisher. 38(3), 597–9 (Mar. 1974); CPM-7411X0977

Fisher, L. M.—Surface resistance of cadmium in a magnetic field — V. V. Lavrova, S. V. Medvedev, V. G. Skobov, L. M. Fisher, and V. A. Yudin. 37(5), 929–36 (Nov. 1973); CPM-7410X0269

—Surface resistance of a cadmium plate in a magnetic field —V. V. Lavrova, S. V. Medvedev, V. G. Skobov, L. M. Fisher, and V. A. Yudin. 38(2), 349–53 (Feb. 1974); CPM-7405F0567

Fogel', N. Ya.—Surface and volume vortex pinning in type–II superconductors —N. Ya. Fogel'. 38(4), 763–6 (Apr. 1974); CPM-7502X0123

Fogel', Ya. M.—Mechanism of the luminescene of polymer films during their formation as a result of bombardment of solids with ion beams —V. V. Gritsyna, T. S. Kiyan, A. G. Koval', Ya. M. Fogel', A. L. Seryugin, and I. S. Martynov. 37(1), 108–12 (Jul. 1973); CPM-7401D0810

Fokina, N. P.—The role of the dipole–dipole reservoir in electron–nuclear double resonance at distant nuclei —L. L. Buishvili, M. D. Zviadadze, and N. P. Fokina. 38(6), 1135–8 (Jun. 1974)

Fomichev, S. V.—Critical phenomena in a liquid in a strong electric field —V. L. Pokrovskiĭ and S. V. Fomichev. 37(4), 731–2 (Oct. 1973); CPM-7407X1473

Fomin, I. A.—Structure of the bound-state spectrum of two rotons in superfluid helium —L. P. Pitaevskiĭ and I. A. Fomin. 38(6), 1257–9 (Jun. 1974)

Fraiman, G. M.—Collisionless damping of forced nonlinear plasma oscillations —G. M. Fraiman. 37(5), 805–8 (Nov. 1973); CPM-7410X0145

Frenkel', A. L.—Gravitational collapse with a physical singularity on an isotropic hypersurface —V. K. Pinus and A. L. Frenkel'. 37(1), 25–7 (Jul. 1973); CPM-7401D0727

Frontas'eva, M. V.—Dependence of the asymmetry of negative muon decay electrons on the length of the hydrocarbon chain of alcohols and alkyl chlorides —A. A. Dzhuraev, V. S. Esveev, Yu. V. Obukhov, V. S. Roganov, M. V. Frontas'eva, and N. I. Kholodov. 37(6), 974–6 (Dec. 1973); CPM-7412X0022

G

Gabovich, M. D.—Excitation of ion Langmuir oscillations by a fast ion beam —M. D. Gabovich, A. A. Goncharov, V. Ya. Poritskiĭ, and I. M. Protsenko. 37(4), 655–7 (Oct. 1973); CPM-7407X1397

Gaĭdukov, Yu. P.—Static surface resistance of zinc in a magnetic field —Yu. P. Gaĭdukov and N. P. Danilova. 37(3), 467–73 (Sep. 1973); CPM-7406X1475

—Magnetoresistance of filamentary cadmium single crystals at 4.2°K —Yu. P. Gaĭdukov and N. P. Danilova. 38(4), 767–71 (Apr. 1974); CPM-7502X0127

Galaĭko, V. P.—High frequency current states in small size superconductors —V. P. Galaĭko. 37(5), 922–8 (Nov. 1973); CPM-7410X0262

—Influence of proximity effect on the thermodynamic and magnetic properties of multilayer superconductors —V. P. Galaĭko and E. V. Bezuglyĭ. 38(5), 1013–7 (May 1974)

Galeev, A. A.—Interaction between an intense electromagnetic wave and a plasma —A. A. Galeev, G. Laval, T. O'Neil, M. N. Rosenbluth, and R. Z. Sagdeev. 38(3), 482–9 (Mar. 1974); CPM-7411X0862

Galev, V. N.—Effect of high uniform pressure and residual stress on the superconductivity of alloys of the $V_3(Si_{1-x}Ge_x)$ system —A. G. Rabinkin, V. N. Galev, and V. N. Laukhin. 37(5), 870–4 (Nov. 1973); CPM-7410X0210

—Effect of high hydrostatic pressure and residual strain on the superconductivity of Nb–Al–Ge alloys with an A15–type structure —V. N. Galev and A. G. Rabin'kin. 38(3), 525–32 (Mar. 1974); CPM-7411X0905

Galitskiĭ, V. M.—Electron kinetics and stationary generation in semiconductor lasers —V. M. Galitskiĭ and V. F. Elesin. 37(2), 351–6 (Aug. 1973); CPM-7404E0605

Galkina, O. S.—Anisotropy of Galvanomagnetic effects in single–crystal cobalt —E. N. Kondorskiĭ, O. S. Galkina, V. I. Ivanovskiĭ, A. V. Cheremushkina, and U. T. Usarov. 38(5), 977–8 (May 1974)

—Magnetic structure of copper–manganese alloys with exchange anisotropy —E. I. Kondorskiĭ, O. S. Galkina, and A. Dzhurakulov. 38(6), 1153–5 (Jun. 1974)

Gal'perin, Yu. M.—Nonlinear acoustic effects in superconductors — Yu. M. Gal'perin, V. L. Gurevich, and V. I. Kozub. 38(3), 517–24 (Mar. 1974); CPM-7411X0897

Ganapol'skiĭ, E. M.—Self–action of a hypersonic wave in acoustic paramegnetic resonance —E. M. Ganapol'skiĭ. 38(6), 1209–14 (Jun. 1974)

Gandelman, G. M.—High–temperature resistivity and the superconductivity of potassium and rubidium at high pressures — G. M. Gandelman, O. Yu. Itskovich, P. S. Kondratenko, I. P. Perstnev, and V. M. Finkelberg. 38(1), 111–5 (Jan. 1974); CPM-7405F0111

Gan'shina, E. A.—Quadratic magnetooptical reflection effects in ferromagnets —G. S. Krinchik and E. A. Gan'shina. 38(5), 983–7 (May 1974)

Gantmakher, V. F.—Anisotropy of the probability of electron scattering by phonons on the Fermi surface of copper —V. F. Gantmakher and V. A. Gasparov. 37(5), 864–9 (Nov. 1973); CPM-7410X0204

—Temperature dependence of the probability for scattering of charge carriers in molybdenum and tungsten —V. V. Boĭko, V. F. Gantmakher, and V. A. Gasparov. 38(3), 604–7 (Mar. 1974); CPM-7411X0984

Gaponenko, V. A.—Paramagnetic resonance of mixed chromium and iron triads —Yu. V. Yablokov, V. A. Gaponenko, M. V. Eremin, V. V. Zelentsov, and T. A. Zhemchuzhnikova. 38(5), 988–90 (May 1974)

Garber, S. R.—Behavior of the specific heat of the ferroelectric phase of KH_2PO_4 near the transition temperature —S. R. Garber and L. A. Smolenko. 37(1), 94–101 (Jul. 1973); CPM-7401D0796

Gasparov, V. A.—Anisotropy of the probability of electron scattering by phonons on the Fermi surface of copper —V. F. Gantmakher and V. A. Gasparov. 37(5), 864–9 (Nov. 1973); CPM-7410X0204

—Temperature dependence of the probability for scattering of charge carriers in molybdenum and tungsten —V. V. Boĭko, V. F. Gantmakher, and V. A. Gasparov. 38(3), 604–7 (Mar. 1974); CPM-7411X0984

Gavrilov, A. A.—On the theory of self–similar degeneracy of homogeneous isotropic turbulence —G. I. Barenblatt and A. A. Gavrilov. 38(2), 399–402 (Feb. 1974); CPM-7405F0617

Genke, Z.—Investigation of magnetic properties of monocrystals of the uranium compounds U_3P_4 and U_3As_4 in strong fields —K. P. Belov, Z. Genke, A. S. Dmitrievskiĭ, R. Z. Levitin, and W. Trzebiatowski. 37(4), 686–8 (Oct. 1973); CPM-7407X1428

Genkin, V. M.—On the theory of Raman scattering of light in superconductors —A. A. Abrikosov and V. M. Genkin. 38(2), 417–9 (Feb. 1974); CPM-7405F0635

German, V. N.—Synthesis of a high–density phase of silicon dioxide in shock waves —V. N. German, M. A. Podurets, and R. F. Trunin. 37(1), 107 (Jul. 1973); CPM-7401D0809

Gershenzon, E. M.—Submillimeter spectroscopy of semiconductors —E. M. Gershenzon, G. N. Gol'tsman, and N. G. Ptitsina. 37(2), 299–304 (Aug. 1973); CPM-7404E0553

—Singularities of energy states of localized electrons in strongly compensated n–InSb —V. V. Arendarchuk, E. M. Gershenzon, L. B. Litvak–Gorskaya, and R. I. Rabinovich. 38(6), 1192–7 (Jun. 1974)

Ginzburg, S. L.—Spin waves and density of states in disordered ferromagnetic substances —S. L. Ginzburg, I. Ya. Korenblit, and E. F. Shender. 37(6), 1141–7 (Dec. 1973); CPM-7412X0189

Ginzburg, V. L.—On the theory of transition radiation in a nonstationary medium —V. L. Ginzburg and V. N. Tsytovich. 38 (1), 65–70 (Jan. 1974); CPM-7405F0065

—Transition scattering —V. L. Ginzburg and V. N. Tsytovich. 38(5), 909–11 (May 1974)

Giterman, M. Sh.—The equation of state and the isochoric specific heat near the critical points of liquids —A. T. Berestov, M. Sh. Giterman, and N. G. Shmakov. 37(6), 1128–32 (Dec. 1973); CPM-7412X0176

Gnedin, Yu. N.—Scattering of radiation by thermal electrons in a magnetic field —Yu. N. Gnedin and R. A. Syunyaev. 38(1), 51–7 (Jan. 1974); CPM-7405F0051

—The transfer equations for normal waves and radiation polarization in an anisotropic medium —Yu. N. Gnedin and G. G. Pavlov. 38 (5), 903–8 (May 1974)

Goedbloed, J. P.—Electron–acoustic and drift instabilities in a finite–pressure plasma with a perpendicular current —J. P. Goedbloed, A. I. Pyatak, and V. L. Sizonenko. 37(6), 1051–6 (Dec. 1973); CPM-7412X0099

Gol'danskiĭ, V. I.—The possibility of creating a nuclear γ laser —V. I. Gol'danskiĭ and Yu. Kagan. 37(1), 49–52 (Jul. 1973); CPM-7401D0751

Golenishchev–Kutuzov, V. A.—Study of phase transitions in KD_2PO_4 single crystals by the acoustic magnetic resonance technique —Kh. G. Bogdanova, Yu. V. Vladimirtsev, V. A. Golenishchev–Kutuzov, and U. Kh. Kopvillem. 38(3), 505–8 (Mar. 1974); CPM-7411X0885

Golikov, V. V.—Production of very cold neutrons —V. V. Golikov, V. I. Lushchikov, and F. L. Shapiro. 37(1), 41–4 (Jul. 1973); CPM-7401D0743

Golts, E. Ya.—Thin layers in acoustics and optics. changes in the transmission and reflection of sound and light on creation of a thin gas layer on the surface of a body in a liquid —G. A. Askar'yan, E. F. Bolshakov, E. Ya. Golts, and V. P. Logvinenko. 37(4), 587–9 (Oct. 1973); CPM-7407X1329

Gol'tsman, G. N.—Submillimeter spectroscopy of semiconductors — E. M. Gershenzon, G. N. Gol'tsman, and N. G. Ptitsina. 37(2), 299–304 (Aug. 1973); CPM-7404E0553

Golubev, S. A.—Non-self-sustained stationary gas discharge induced by electron-beam ionization in N_2–CO_2 mixtures at atmospheric pressure —E. P. Velikhov, S. A. Golubev, Yu. K. Zemtsov, A. F. Pal', I. G. Persiantsev, V. D. Pis'mennyĭ, and A. T. Rakhimov. **38** (2), 267–9 (Feb. 1974); CPM-7405F0485

Golubev, Yu. M.—Radiation transfer in quantum electrodynamics —Yu. M. Golubev. **38**(2), 228–32 (Feb. 1974); CPM-7405F0446

Golyaev, Yu. D.—Spatial field and intensity correlation functions of laser radiation —A. G. Arutyunyan, S. A. Akhmanov, Yu. D. Golyaev, V. G. Tunkin, and A. S. Chirkin. **37**(5), 764–71 (Nov. 1973); CPM-7410X0104

Goncharov, A. A.—Excitation of ion Langmuir oscillations by a fast ion beam —M. D. Gabovich, A. A. Goncharov, V. Ya. Poritskiĭ, and I. M. Protsenko. **37**(4), 655–7 (Oct. 1973); CPM-7407X1397

Goncharov, N. V.—Photoproduction of π mesons from C^{12} in the photon-energy range from 250 to 1200 MeV —N. V. Goncharov, A. I. Derebchinskiĭ, O. G. Konovalov, S. G. Tonapetyan, and V. M. Khvorostyan. **37**(1), 38–40 (Jul. 1973); CPM-7401D0740

—Polarization of protons from the $\gamma+p\to\pi^0+p$ reaction produced by 692–1028 MeV photons at 90° in the center-of-mass system —N. V. Goncharov, A. I. Derebchinskiĭ, A. A. Zybalov, O. G. Konovalov, A. E. Tenishev, S. G. Tonapetyan, and V. M. Khvorostyan. **37**(2), 205–7 (Aug. 1973); CPM-7404E0459

Gonchukov, S. A.—Mode locking in gas lasers —S. A. Gonchukov, V. M. Ermanchenko, and E. D. Protsenko. **38**(2), 239–42 (Feb. 1974); CPM-7405F0457

Gorbunov, L. M.—Intensity of stimulated Mandel'shtam–Brillouin scattering in a plasma —L. M. Gorbunov. **38**(3), 490–3 (Mar. 1974); CPM-7411X0870

—Anistropy of stimulated Mandel'shtam–Brillouin scattering —L. M. Gorbunov. **38**(4), 666–8 (Apr. 1974); CPM-7502X0026

Gordiets, B. F.—Kinetics of nonequilibrium dissociation of molecules in cascade excitation of oscillations by laser radiation —B. F. Gordiets, A. I. Osipov, and V. Ya. Panchenko. **38**(3), 443–8 (Mar. 1974); CPM-7411X0823

Gordyunin, S. A.—Influence of magnetic field on excitonic transition —S. A. Gordyunin. **38**(6), 1189–91 (Jun. 1974)

Gor'kov, L. P.—Some features of viscous flow of vortices in superconducting alloys near the critical temperature—L. P. Gor'kov and N. B. Kopnin. **37**(1), 183–9 (Jul. 1973); CPM-7401D0885

—Viscous flow of vortices in type-II superconducting alloys —L. P. Gor'kov and N. B. Kopnin. **38**(1), 195–201 (Jan. 1974); CPM-7405F0195

—Contribution to the theory of the properties of the superconductors with β-W structure —L. P. Gor'kov. **38**(4), 830–9 (Apr. 1974); CPM-7502X0190

Gorshkov, K. A.—High intensity circularly polarized waves in nonlinear dispersive media —K. A. Gorshkov, V. A. Kozlov, and L. A. Ostrovskiĭ. **38**(1), 93–5 (Jan. 1974); CPM-7405F0093

Gorshkov, N. G.—Accumulation of iodine molecules in flash photolysis of CF_3I and n-C_3F_7I vapor —I. M. Belousova, N. G. Gorshkov, O. B. Danilov, V. Yu. Zaleskiĭ, and I. L. Yachnev. **38** (2), 254–7 (Feb. 1974); CPM-7405F0472

Gorshkov, V. G.—Relativistic compton effect on the bound electron —V. G. Gorshkov, A. I. Mikhailov, and S. G. Sherman. **37**(4), 572–8 (Oct. 1973); CPM-7407X1314

Grasyuk, A. Z.—Self-transparency in gallium arsenide on two-photon interaction with an ultrashort light pulse —T. L. Gvardzhaladze, A. Z. Grasyuk, and V. A. Kovalenko. **37**(2), 227–30 (Aug. 1973); CPM-7404E0481

Grigor'ev, V. N.—Spin diffusion in solid He^3–He^4 solutions —V. N. Grigor'ev, B. N. Esel'son, and V. A. Mikheev. **37**(2), 309–10 (Aug. 1973); CPM-7404E0563

Grishchuk, L. P.—Emission of gravitational waves by an electromagnetic cavity —L. P. Grishchuk and M. V. Sazhin. **38**(2), 215–21 (Feb. 1974); CPM-7405F0433

—Electromagnetic detectors of gravitational waves —V. B. Braginskiĭ, L. P. Grishchuk, A. G. Doroshkevich, Ya. B. Zel'dovich, I. D. Novikov, and M. V. Sazhin. **38**(5), 865–9 (May 1974)

Grishin, A. M.—Giant quantum oscillations of Rayleigh sound wave absorption in metals —A. M. Grishin and É. A. Kaner. **38**(2), 365–72 (Feb. 1974); CPM-7405F0583

—Propagation of surface acoustic waves in metals in a magnetic field —A. M. Grishin and Yu. V. Tarasov. **38**(4), 783–8 (Apr. 1974); CPM-7502X0143

Gritsyna, V. V.—Mechanism of the luminescene of polymer films during their formation as a result of bombardment of solids with ion beams —V. V. Gritsyna, T. S. Kiyan, A. G. Koval', Ya. M. Fogel', A. L. Seryugin, and I. S. Martynov. **37**(1), 108–12 (Jul. 1973); CPM-7401D0810

Grosberg, A. Yu.—State diagram of a polymer globule and the problem of self-organization of its spatial structure —I. M. Lifshitz and A. Yu. Grosberg. **38**(6), 1198–208 (Jun. 1974)

Grundel', L. M.—Destruction of superconductivity in thin narrow films by a current —V. P. Andratskiĭ, L. M. Grundel', V. N. Gubankov, and N. B. Pavlov. **38**(4), 794–8 (Apr. 1974); CPM-7502X0154

Grushko, A. I.—Investigation of the electronic mechanism of the isomorphic phase transition in cerium —V. A. Shaburov, I. M. Band, A. I. Grushko, T. B. Mezentseva, E. V. Petrovich, Yu. P. Smirnov, A. E. Sovestnov, O. I. Sumbaev, M. B. Trzhaskovskaya, and I. A. Markova. **38**(3), 573–81 (Mar. 1974); CPM-7411X0953

Grzhegorzhevskiĭ, O. A.—Magnetrooptical investigation of the magnetization compensation point in gadolinium iron garnets —O. A. Grzhegorzhevskiĭ and R. V. Pisarev. **38**(2), 312–6 (Feb. 1974); CPM-7405F0530

Gubankov, V. N.—Destruction of superconductivity in thin narrow films by a current —V. P. Andratskiĭ, L. M. Grundel', V. N. Gubankov, and N. B. Pavlov. **38**(4), 794–8 (Apr. 1974); CPM-7502X0154

Gurevich, A. I.—Decay of 2S-states of the hydrogen atom in a magnetic field —A. I. Gurevich. **37**(4), 610–5 (Oct. 1973); CPM-7407X1352

Gurevich, A. V.—Self-action of radio waves in the vicinity of plasma resonance —V. V. Vas'kov and A. V. Gurevich. **37**(4), 646–50 (Oct. 1973); CPM-7407X1388

—One-dimensionalmotion of a low density plasma in a magnetic field —A. V. Gurevich, L. V. Pariiskaya, and L. P. Pitaevskiĭ. **37**(6), 1071–7 (Dec. 1973); CPM-7412X0119

—Nonstationary structure of a collisionless shock wave —A. V. Gurevich and L. P. Pitaevskiĭ. **38**(2), 291–7 (Feb. 1974); CPM-7405F0509

Gurevich, L. É.—Effect of spatial dispersion of carrier electric conductivity on the light- (radio-) electric effect in a strong magnetic field —L. É. Gurevich and V. S. Travnikov. **38**(2), 335–8 (Feb. 1974); CPM-7405F0553

Gurevich, V. L.—Nonlinear acoustic effects in superconductors —Yu. M. Gal'perin, V. L. Gurevich, and V. I. Kozub. **38**(3), 517–24 (Mar. 1974); CPM-7411X0897

—Stability of nonequilibrium Fermi distributions with respect to Cooper pairing —A. G. Aronov and V. L. Gurevich. **38**(3), 550–6 (Mar. 1974); CPM-7411X0930

Gurzhi, R. N.—Low-temperature electrical conductivity of metals with closed Fermi surfaces —R. N. Gurzhi and A. I. Kopeliovich. **37**(1), 195–200 (Jul. 1973); CPM-7401D0897

Gvardzhaladze, T. L.—Self-transparency in gallium arsenide on two-photon interaction with an ultrashort light pulse —T. L. Gvardzhaladze, A. Z. Grasyuk, and V. A. Kovalenko. **37**(2), 227–30 (Aug. 1973); CPM-7404E0481

H

Haudrich, K.—Exact inequalities and their consequences in the theory of amorphous magnets —K. Handrich. **37**(4), 703–9 (Oct. 1973); CPM-7407X1445

I

Il'inskiĭ, Yu. A.—Theory of stimulated Raman scattering by rotational transitions —Yu. A. Il'inskiĭ and R. V. Khokhlov. **37**(4), 619–21 (Oct. 1973); CPM-7407X1361

—Narrowing of γ-resonance lines in crystals by radio-frequency fields —Yu. A. Il'inskiĭ and R. V. Khokhlov. **38**(4), 809–12 (Apr. 1974); CPM-7502X0169

Illarionov, A. F.—The structure of a shock wave in a radiation-dominated plasma —Ya. B. Zel'dovich and A. F. Illarionov. **38**(4), 643–7 (Apr. 1974); CPM-7502X0003

Imshennik, V. S.—The dynamics of plasma-column constrictions and the electromagnetic acceleration of ions —V. S. Imshennik, S. M. Osovets, and I. V. Otroshchenko. **37**(6), 1037–44 (Dec. 1973); CPM-7412X0085

Indenbom, V. L.—Electron drag elastic field sources and the conductivity of metals —V. I. Al'shitz and V. L. Indenbom. **37**(5), 914–7 (Nov. 1973); CPM-7410X0254

Iolin, E. M.—Effect of collective motions in a fluid on the microscopic magnetic spin parameters —E. M. Iolin. **38**(4), 741–4 (Apr. 1974); CPM-7502X0101

Irkhin, Yu. P.—Magnetic anisotropy of rare earth alloys —V. P. Karpenko and Yu. P. Irkhin. **37**(2), 383–5 (Aug. 1973); CPM-7404E0637

Ishchenko, S. S.—Dynamics of the stationary triple electron–nucleus–nuclear resonance —N. P. Baran, A. B. Brik, and S. S. Ishchenko. **37**(2), 357–60 (Aug. 1973); CPM-7404E0611

Istomin, Ya. N.—Nonlinear theory of a quasimonochromatic packet of electrostatic waves in an inhomogeneous plasma —Ya. N. Istomin, V. I. Karpman, and D. R. Shklyar. **37**(6), 1045–50 (Dec. 1973)

Itskevich, E. S.—Influence of hydrostatic pressure on the splitting of the Landau levels in tellurium —V. B. Anzin, M. S. Bresler, E. S. Itskevich, Yu. V. Kosichkin, V. A. Sukhoparov, A. N. Tolmachev, and I. I. Farbshtein. **38**(4), 755–8 (Apr. 1974); CPM-7502X0115

Itskovich, O. Yu.—High–temperature resistivity and the superconductivity of potassium and rubidium at high pressures — G. M. Gandelman, O. Yu. Itskovich, P. S. Kondratenko, I. P. Perstnev, and V. M. Finkelberg. **38**(1), 111–5 (Jan. 1974); CPM-7405F0111

Ivanchenko, Yu. M.—Excitation of oscillations of charge carrier density in a tunnel junction —Yu. M. Ivanchenko and Yu. V. Medvedev. **37**(3), 520–4 (Sep. 1973); CPM-7406X1528

Ivanov, A. A.—Interaction between a high frequency magnetic field and potential plasma oscillations in a Q–device —L. L. Artsimovich, A. A. Ivanov, A. N. Luk'yanchuk, V. L. Papernyĭ, V. D. Rusanov, and S. S. Sobolev. **37**(2), 236–9 (Aug. 1973); CPM-7404E0490

—Thermal ionization wave in a current–carrying system —A. A. Ivanov, V. V. Parail, and T. K. Soboleva. **37**(4), 633–6 (Oct. 1973); CPM-7407X1375

—Nonlinear interaction of high–amplitude Langmuir waves in a collisionless plasma —A. A. Ivanov and M. G. Nikulin. **38**(1), 83–5 (Jan. 1974); CPM-7405F0083

—Nonlinear interaction of space–charge waves with trapped electrons —A. A. Ivanov, S. M. Korshunov, N. S. Beryuleva, and S. P. Tarasov. **38**(5), 927–30 (May 1974)

Ivanov, S. N.—Peculiarities in the amplification of ultrasound in n–InSb in strong magnetic fields —S. N. Ivanov and G. D. Mansfel'd. **37**(6), 1096–8 (Dec. 1973); CPM-7412X0144

Ivanov, V. N.—Investigation of light amplification in a pulsed acetylene–air combustion gasdynamic laser —G. I. Kozlov, V. N. Ivanov, and A. S. Korablev. **38**(1), 41–3 (Jan. 1974); CPM-7405F0041

Ivanovskiĭ, V. I.—Anisotropy of Galvanomagnetic effects in single–crystal cobalt —E. N. Kondorskiĭ, O. S. Galkina, V. I. Ivanovskiĭ, A. V. Cheremushkina, and U. T. Usarov. **38**(5), 977–8 (May 1974)

Ivashin, A. V.—Theory of the interaction of atoms (muonium, positronium) with magnetized substances —V. G. Baryshevskiĭ and A. V. Ivashin. **38**(4), 730–2 (Apr. 1974); CPM-7502X0090

Ivlev, B. I.—Effect of laser radiation on superconductivity —R. A. Vardanyan and B. I. Ivlev. **38**(6), 1156–61 (Jun. 1974)

K

Kadomtsev, B. B.—Nonlinear helical perturbations of a plasma in a tokamak —B. B. Kadomtsev and O. P. Pogutse. **38**(2), 283–90 (Feb. 1974); CPM-7405F0501

Kagan, Yu.—The possibility of creating a nuclear γ laser —V. I. Gol'danskiĭ and Yu. Kagan. **37**(1), 49–52 (Jul. 1973); CPM-7401D0751

—Theory of the channeling effect: II. Influence of inelastic collisions —Yu. Kagan and Yu. V. Kononets. **37**(3), 530–40 (Sep. 1973); CPM-7406X1538

—Suppression of the inelastic channels of a nuclear reaction in a crystal under the conditions of hyperfine splitting —A. M. Afanas'ev and Yu. Kagan. **37**(6), 987–92 (Dec. 1973); CPM-7412X0035

—Theory of particle transfer in extremely narrow bands —Yu. Kagan and L. A. Maksimov. **38**(2), 307–11 (Feb. 1974); CPM-7405F0525

Kaĭtmazov, S. D.—Effect of magnetic field on soft x–ray radiation from laser plasma —T. B. Volyak, S. D. Kaĭtmazov, A. M. Prokhorov, and E. I. Shklovskiĭ. **37**(2), 245–6 (Aug. 1973); CPM-7404E0499

Kakharov, S. I.—Asymptotic electron terms of colliding identical heavy nuclei —V. P. Zrelnov and S. I. Kakharov. **37**(6), 983–6 (Dec. 1973); CPM-7412X0031

Kalashnikov, N. P.—Dynamic suppression of the maxima of interference bremsstrahlung emitted by ultrafast electrons in a single crystal —N. P. Kalashnikov. **37**(4), 723–4 (Oct. 1973); CPM-7407X1465

Kalinichenko, A. I.—Excitation of acoustic oscillations by a low density beam of charged particles —A. I. Kalinichenko and V. T. Lazurik–Él'tsufin. **38**(6), 1181–3 (Jun. 1974)

Kalmykova, S. S.—Electron beam excitation of regular oscillations in an inhomogeneous plasma waveguide —S. S. Kalmykova, V. I. Kurilko, V. I. Kucherov, and A. P. Tolstoluzhsky. **37**(2), 240–Q44 (Aug. 1973); CPM-7404E0494

—Collective interaction between a monoenergetic beam and a plasma layer —S. S. Kalmykova. **38**(6), 1124–8 (Jun. 1974)

Kamchatnov, A. M.—Cascade emission of γ–quanta by highly excited nuclei —V. G. Nosov and A. M. Kamchatnov. **38**(1), 6–11 (Jan. 1974); CPM-7405F0006

Kamilov, I. K.—Critical singularities of the propagation of ultrasonic waves in yttrium iron garnet near the Curie point —I. K. Kamilov and Kh. K. Aliev. **38**(5), 954–6 (May 1974)

Kaner, É. A.—Contribution to the theory of superheat instability in semiconductors —A. A. Bulgakov, É. A. Kaner, S. I. Khankina, and V. M. Yakovenko. **37**(1), 171–5 (Jul. 1973); CPM-7401D0873

—Electromagnetic excitation of sound in alkali metals located in a magnetic field —É. A. Kaner and V. L. Fal'ko. **37**(3), 516–20 (Sep. 1973); CPM-7406X1524

—Giant quantum oscillations of Rayleigh sound wave absorption in metals —A. M. Grishin and É. A. Kaner. **38**(2), 365–72 (Feb. 1974); CPM-7405F0583

—Possibility of propagation of dopplerons in metals with an open Fermi surface —É. A. Kaner and O. I. Lyubimov. **38**(2), 386–91 (Feb. 1974); CPM-7405F0604

Kano, L. M.—Magnetic flux pinning in a type–I superconductor in the intermediate state —L. M. Kano and V. A. Shukhman. **37**(3), 452–7 (Sep. 1973); CPM-7406X1460

Kaplan, A. E.—Exact theory of relaxation of two–level systems in a strong nonmonochromatic field —A. E. Kaplan. **38**(4), 705–11 (Apr. 1974); CPM-7502X0065

Kaplan, I. G.—Relativistic photoeffect in the H_2 molecule —I. G. Kaplan and A. P. Markin. **37**(2), 216–22 (Aug. 1973); CPM-7404E0470

Kaplan, M. I.—Asymptotic expansion of the partition function for a rigid asymmetric top —M. I. Kaplan. **38**(6), 1260–1 (Jun. 1974)

Kapustina, O. A.—Effect of ultrasonic surface waves on liquid crystals —O. A. Kapustina and Yu. G. Statnikov. **37**(1), 117–9 (Jul. 1973); CPM-7401D0819

Karataev, V. I.—The mass–reflectron, a new nonmagnetic time–of–fight mass spectrometer with high resolution —B. A. Mamyrin, V. I. Karataev, D. V. Shmikk, and V. A. Zagulin. **37**(1), 45–8 (Jul. 1973); CPM-7401D0747

Karimov, Yu. S.—Investigation of the disordered state of two–dimensional ferromagnetic substances —Yu. S. Karimov. **38** (1), 129–33 (Jan. 1974); CPM-7405F0129

Karlov, N. V.—Dissociation and belaching of a multilevel molecular gas by high power CO_2 laser radiation —N. V. Karlov, N. A. Karpov, Yu. N. Petrov, and O. M. Stel'makh. **37**(6), 1012–6 (Dec. 1973); CPM-7412X0060

Karpenko, V. P.—Magnetic anisotropy of rare earth alloys —V. P. Karpenko and Yu. P. Irkhin. **37**(2), 383–5 (Aug. 1973); CPM-7404E0637

Karpman, V. I.—Nonlinear theory of a quasimonochromatic packet of electrostatic waves in an inhomogeneous plasma —Ya. N. Istomin, V. I. Karpman, and D. R. Shklyar. **37**(6), 1045–50 (Dec. 1973)

Karpov, N. A.—Dissociation and belaching of a multilevel molecular gas by high power CO_2 laser radiation —N. V. Karlov, N. A. Karpov, Yu. N. Petrov, and O. M. Stel'makh. **37**(6), 1012–6 (Dec. 1973); CPM-7412X0060

Karpov, V. Ya.—Similarity of photodissociation waves and experimental determination of the primary period of the photochemical process —B. L. Borovich, V. Ya. Karpov, N. I. Kozlov, and Yu. Yu. Stoilov. **37**(4), 616–8 (Oct. 1973); CPM-7407X1358

Kaschenko, M. P.—Magnetic-field-induced interaction of collective excitations in a weak ferromagnet with single-ion anisotropy —V. N. Kitaev, M. P. Kaschenko, and L. V. Kurbatov. **38**(6), 1166–9 (Jun. 1974)

Kashchenko, M. P.—Spin waves in an Heisenberg ferromagnetic substance with single-ion anisotropy —M. P. Kashchenko, N. F. Balakhonov, and L. V. Kurbatov. **37**(1), 201–4 (Jul. 1973); CPM-7401D0903

Kataev, D. I.—Spectroscopy of vapors of low-volatility compounds supercooled in a supersonic stream —D. I. Kataev and A. A. Mal'tsev. **37**(5), 772–7 (Nov. 1973); CPM-7410X0112

Kats, A. V.—Symmetry properties of the collision integral and nonisotropic stationary solutions in weak turbulence theory —A. V. Kats and V. M. Kontorovich. **37**(1), 80–5 (Jul. 1973); CPM-7401D0782

—Anisotropic turbulent distributions for waves with a nondecay dispersion law —A. V. Kats and V. M. Kontorovich. **38**(1), 102–7 (Jan. 1974); CPM-7405F0102

Kats, E. I.—Behavior of nematic liquid crystals in a rotating magnetic field —E. I. Kats. **38**(1), 158–61 (Jan. 1974); CPM-7405F0158

—Optical activity in the isotropic phase of cholesteric liquid crystals —E. I. Kats. **38**(6), 1242–5 (Jun. 1974)

Katsnel'son, B. G.—Alteration of atomic multiplet in an intense varying field —B. A. Zon and B. G. Katsnel'son. **38**(3), 470–5 (Mar. 1974); CPM-7411X0850

Kaufman, R. N.—Turning region of the Poynting vector of a wave incident on an inhomogeneous plasma towards the direction of an external magnetic field —Ya. L. A'lpert and R. N. Kaufman. **37**(4), 651–4 (Oct. 1973); CPM-7407X1393

Kaunov, N. G.—On the nature of the magnetization discontinuity in MnBi —E. V. Shtol'ts and N. G. Kaunov. **38**(4), 723–6 (Apr. 1974); CPM-7502X0083

Kaverin, A. M.—Attainable overheating of liquid argon —V. G. Baĭdakov, V. P. Skripov, and A. M. Kaverin. **38**(3), 557–60 (Mar. 1974); CPM-7411X0937

Kazanskiĭ, S. A.—Influence of the dynamic Jahn–Teller effect on the structure of quartet terms of the tetrahedrally coordinated ion Co^{2+}(ZnS—Co) —A. I. Ryskin, A. L. Natadze, and S. A. Kazanskiĭ. **37**(3), 462–6 (Sep. 1973); CPM-7406X1470

Kazarinov, Yu. M.—Structure functions of deep inelastic ep scattering —S. I. Bilen'kaya, S. M. Bilen'kiĭ, Yu. M. Kazarinov, and L. I. Lapidus. **38**(5), 874–8 (May 1974)

Kereselidze, T. M.—Calculation of the ground term $X^1\Sigma_g^+$ of the helium quasimolecular doubly-charged ion He_2^{++} by a simple method —T. M. Kereselidze and O. B. Firsov. **38**(1), 49–50 (Jan. 1974); CPM-7405F0049

Kerimov, O. M.—Electric ionization lasers —N. G. Basov, É. M. Belenov, V. A. Danilychev, O. M. Kerimov, I. B. Kovsh, A. S. Podsosonnyĭ, and A. F. Suchkov. **37**(1), 58–64 (Jul. 1973); CPM-7401D0760

Kessel', A. R.—Conduction electron spin echo in metals —V. A. Zhikharev, A. R. Kessel', É. G. Kharakhash'yan, F. G. Cherkasov, and K. K. Shvarts. **37**(4), 689–94 (Oct. 1973); CPM-7407X1431

—Spin diffusion in nuclear quadrupole resonance —I. L. Bukhbinder and A. R. Kessel'. **38**(4), 745–9 (Apr. 1974); CPM-7502X0105

Khadzhi, P. I.—Bose–Einstein condensation of dipole-active excitons and photons —S. A. Moskalenko, M. F. Miglei, M. I. Shmiglyuk, P. I. Khadzhi, and A. V. Lelyakov. **37**(5), 902–8 (Nov. 1973); CPM-7410X0242

Khaĭkin, M. S.—Electron–phonon interaction and cyclotron resonance in lead —I. Ya. Krasnopolin and M. S. Khaĭkin. **37**(5), 883–9 (Nov. 1973); CPM-7410X0223

—Cyclotron resonance on nonextremal orbits —A. P. Volodin, M. S. Khaĭkin, and V. S. Édel'man. **38**(5), 1052–6 (May 1974)

Khakimov, F. Kh.—Stochastic heating of plasma during the development of Langmuir turbulence instability —F. Kh. Khakimov and V. N. Tsytovich. **37**(4), 641–5 (Oct. 1973); CPM-7407X1383

Khankina, S. I.—Contribution to the theory of superheat instability in semiconductors —A. A. Bulgakov, É. A. Kaner, S. I. Khankina, and V. M. Yakovenko. **37**(1), 171–5 (Jul. 1973); CPM-7401D0873

Kharakhash'yan, É. G.—Conduction electron spin echo in metals —V. A. Zhikharev, A. R. Kessel', É. G. Kharakhash'yan, F. G. Cherkasov, and K. K. Shvarts. **37**(4), 689–94 (Oct. 1973); CPM-7407X1431

Kharchenko, I. F.—Investigation of the mechanism of excitation of stochastic oscillations in a beam–plasma discharge —V. A. Lavrovskiĭ, I. F. Kharchenko, and E. G. Shustin. **38**(6), 1117–23 (Jun. 1974)

Kharchenko, N. F.—Magnetic birefringence and the domain structure of antiferromagnetic cobalt carbonate —N. F. Kharchenko, V. V. Eremenko, and O. P. Tutakina. **37**(4), 672–7 (Oct. 1973); CPM-7407X1414

Kharchenko, T. N.—Superconductivity and electron structure of a solid solution of titanium in niobium —I. S. Shchetkin and T. N. Kharchenko. **37**(3), 491–3 (Sep. 1973); CPM-7406X1499

Kharlamov, A. A.—Reflection of conduction electrons from an atomically pure (110) face a of a tungsten crystal —P. P. Lutsishin, O. A. Panchenko, and A. A. Kharlamov. **37**(6), 1083–5 (Dec. 1973); CPM-7412X0131

Kharlamov, B. M.—Fine structure of luminescence spectra of laser-excited organic molecules and the nature of the broad spectral bands of solid solutions —R. I. Personov, E. I. Al'shitz, L. A. Bykovskaya, and B. M. Kharlamov. **38**(5), 912–7 (May 1974)

Khazan, L. S.—Theory of polarons in multivalley crystals. III. Arbitrary coupling force between the electron and the lattice polarization vibrations —S. I. Pekar, L. S. Khazan, and V. I. Sheka. **38**(5), 999–1002 (May 1974)

Khemraev, B.—Absorption and dispersion of ultrasound and hypersound in glycerine —A. A. Berdyev, V. A. Lysenko, and B. Khemraev. **38**(3), 515–6 (Mar. 1974); CPM-7411X0895

Khimich, T. A.—Magnetic structure and localization of Co^{2+} and Fe^{2+} ions in hexagonal ferrites —V. F. Belov, T. A. Khimich, M. N. Shipko, I. S. Zheludev, E. V. Korneev, and N. S. Ovanesyan. **37**(6), 1089–95 (Dec. 1973); CPM-7412X0137

Khizhnyak, A. I.—Frequency tunable of giant pulses in spectrally inhomogeneous media —V. B. Markov, T. Ya. Marusiĭ, M. S. Soskin, and A. I. Khizhnyak. **37**(5), 778–83 (Nov. 1973); CPM-7410X0118

Khlebopros, R. G.—Electric conductivity of ferromagnets with a domain structure —Yu. V. Zakharov, Yu. I. Man'kov, and R. G. Khlebopros. **38**(1), 119–22 (Jan. 1974); CPM-7405F0119

Khmelevskiĭ, A. N.—Discontinuity of vibrational and translational temperatures in a system with fast-particle sources —A. I. Osipov, A. N. Khmelevskiĭ, and R. V. Khokhlov. **38**(2), 264–6 (Feb. 1974); CPM-7405F0482

Khmel'nitskiĭ, D. E.—Phase transitions of the displacement type in crystals at very low temperatures —D. E. Khmel'nitskiĭ and V. L. Shneerson. **37**(1), 164–70 (Jul. 1973); CPM-7401D0866

Khodovoĭ, V. A.—Investigation of stimulated four-photon parametric scattering of laser radiation in alkali–metal vapor —A. M. Bonch-Bruevich, S. G. Przhibelskiĭ, V. A. Khodovoĭ, and V. V. Khromov. **38**(1), 30–6 (Jan. 1974); CPM-7405F0030

Khokhlov, R. V.—Theory of stimulated Raman scattering by rotational transitions —Yu. A. Il'inskiĭ and R. V. Khokhlov. **37**(4), 619–21 (Oct. 1973); CPM-7407X1361

—Collision–radiative processes and molecular lasers —M. M. Mkrtchyan, V. T. Platonenko, and R. V. Khokhlov. **38**(1), 71–4 (Jan. 1974); CPM-7405F0071

—Discontinuity of vibrational and translational temperatures in a system with fast-particle sources —A. I. Osipov, A. N. Khmelevskiĭ, and R. V. Khokhlov. **38**(2), 264–6 (Feb. 1974); CPM-7405F0482

—Narrowing of γ-resonance lines in crystals by radio-frequency fields —Yu. A. Il'inskiĭ and R. V. Khokhlov. **38**(4), 809–12 (Apr. 1974); CPM-7502X0169

Kholodov, N. I.—Dependence of the asymmetry of negative muon decay electrons on the length of the hydrocarbon chain of alcohols and alkyl chlorides —A. A. Dzhuraev, V. S. Esveev, Yu. V. Obukhov, V. S. Roganov, M. V. Frontas'eva, and N. I. Kholodov. **37**(6), 974–6 (Dec. 1973); CPM-7412X0022

Khomskiĭ, D. I.—Crystal structure and magnetic properties of substances with orbital degeneracy —K. I. Kugel' and D. I. Khomskiĭ. **37**(4), 725–30 (Oct. 1973); CPM-7407X1467

Khriplovich, I. B.—The radiations emitted by an ultrarelativistic particle in a gravitational field —I. B. Khriplovich and E. V. Shuryak. **38**(6), 1067–8 (Jun. 1974)

Khromov, V. V.—Investigation of stimulated four-photon parametric scattering of laser radiation in alkali–metal vapor —A. M. Bonch-Bruevich, S. G. Przhibelskiĭ, V. A. Khodovoĭ, and V. V. Khromov. **38**(1), 30–6 (Jan. 1974); CPM-7405F0030

Khromykh, A. M.—A method for measuring collision broadening of spectral lines —B. V. Rybakov, S. S. Skulachenko, A. M. Khromykh, and I. I. Yudin. **37**(4), 582–3 (Oct. 1973); CPM-7407X1324

Khudik, V. N.—Nonlinear Landau damping of a Langmuir wave packet —D. D. Ryutov and V. N. Khudik. **37**(4), 637–40 (Oct. 1973); CPM-7407X1379

Khvorostyan, V. M.—Photoproduction of π mesons from C^{12} in the photon-energy range from 250 to 1200 MeV —N. V. Goncharov, A. I. Derebchinskiĭ, O. G. Konovalov, S. G. Tonapetyan, and V. M. Khvorostyan. **37**(1), 38–40 (Jul. 1973); CPM-7401D0740

—Polarization of protons from the $\gamma+p\to\pi^0+p$ reaction produced by 692–1028 MeV photons at 90° in the center-of-mass system —N. V. Goncharov, A. I. Derebchinskiĭ, A. A. Zybalov, O. G. Konovalov, A. E. Tenishev, S. G. Tonapetyan, and V. M. Khvorostyan. **37**(2), 205–7 (Aug. 1973); CPM-7404E0459

Kir'yanov, K. E.—Optical frequency modulation of electrons diffracted by a crystal —V. V. Fedorov, K. E. Kir'yanov, and A. I. Smirnov. **37**(4), 737–8 (Oct. 1973); CPM-7407X1479

Kiselev, V. M.—Photodissociative I^{127} laser in a magnetic field —I. M. Belousova, B. D. Bobrov, V. M. Kiselev, V. N. Kurzenkov, and P. I. Krepostnov. **38**(2), 258–63 (Feb. 1974); CPM-7405F0476

Kitaev, V. N.—Magnetic-field-induced interaction of collective excitations in a weak ferromagnet with single-ion anisotropy —V. N. Kitaev, M. P. Kaschenko, and L. V. Kurbatov. **38**(6), 1166–9 (Jun. 1974)

Kitsenko, A. B.—Parametric instabilities in a plasma containing two types of ions —A. B. Kitsenko and K. N. Stepanov. **37**(5), 813–9 (Nov. 1973); CPM-7410X0153

Kiyan, T. S.—Mechanism of the luminescene of polymer films during their formation as a result of bombardment of solids with ion beams —V. V. Gritsyna, T. S. Kiyan, A. G. Koval', Ya. M. Fogel', A. L. Seryugin, and I. S. Martynov. **37**(1), 108–12 (Jul. 1973); CPM-7401D0810

Klochan, E. L.—Oscillation regimes in a rotating solid-state ring laser —E. L. Klochan, L. S. Kornienko, N. V. Kravtsov, E. G. Lariontsev, and A. N. Shelaev. **38**(4), 669–74 (Apr. 1974); CPM-7502X0029

Kluge, G.—A possible mechanism for the peak effect in hard superconductors —G. Kluge and V. Rudat. **38**(4), 738–40 (Apr. 1974); CPM-7502X0098

Klyatskin, V. I.—On the statistical theory of reflection of light in randomly inhomogeneous media —V. I. Klyatskin. **38**(1), 27–9 (Jan. 1974); CPM-7405F0027

Klyshko, D. N.—Spatial dispersion of two-photon absorption —D. N. Klyshko and B. V. Polkovnikov. **37**(1), 154–5 (Jul. 1973); CPM-7401D0856

—Stimulated light scattering and four-photon processes —D. N. Klyshko. **37**(4), 590–4 (Oct. 1973); CPM-7407X1332

Klyucharev, V. A.—Temperature effects in quadrupole interaction in NbHf alloys —V. A. Klyucharev, V. P. Bozhko, and A. S. Bulatov. **37**(4), 678–80 (Oct. 1973); CPM-7407X1420

Kobzev, G. A.—Effect of resonances in elastic scattering on the bremsstrahlung of electrons in an atomic field —L. G. D'yachkov, G. A. Kobzev, and G. É. Norman. **38**(4), 697–700 (Apr. 1974); CPM-7502X0057

Kochelap, V. A.—Phase transition in multivalley semiconductors in a magnetic field —V. A. Kochelap and V. N. Sokolov. **38**(2), 408–12 (Feb. 1974); CPM-7405F0626

Kochkin, A. P.—Specific heat and spin paramagnetism of an electron gas in the presence of resonant scattering impurities —A. P. Kochkin. **37**(1), 178–82 (Jul. 1973); CPM-7401D0880

Kodess, B..N.—Nuclear magnetic resonance of V^{51} in a V_3Si single crystal —B. N. Tret'yakov, V. A. Marchenko, V. B. Kuritsin, and B..N. Kodess. **38**(4), 772–4 (Apr. 1974); CPM-7502X0132

Kogan, Sh. M.—Photothermomagnetic effect in a semimetal upon excitation of weakly damped waves —Sh. M. Kogan. **37**(3), 544–5 (Sep. 1973); CPM-7406X1552

—Collisionless relaxation of the energy gap in superconductors —A. F. Volkov and Sh. M. Kogan. **38**(5), 1018–21 (May 1974)

Kogan, V. I.—Two-level system with damping in a plasma —V. I. Kogan, V. S. Lisitsa, and A. D. Selidovkin. **38**(1), 75–82 (Jan. 1974); CPM-7405F0075

Kolesnichenko, V. E.—Magnetic properties of compounds of rare-earth metals with iron, of the type RF_3 —K. P. Belov, S. A. Nikitin, A. M. Bisliev, E. M. Savitskiĭ, V. F. Terekhova, and V. E. Kolesnichenko. **37**(6), 1086–8 (Dec. 1973); CPM-7412X0134

Kolesov, V. V.—Drift oscillations of an inhomogeneous plasma in a quantizing magnetic field —V. V. Kolesov. **38**(6), 1107–10 (Jun. 1974)

Komnik, Yu. F.—Connection between the superconducting properties and the structure of "amorphous" low-temperature bismuth films —B. I. Belevtsev, Yu. F. Komnik, and L. A. Yatsuk. **38**(6), 1225–30 (Jun. 1974)

Kompaneets, D. A.—Oscillation damping of the free surface of a superfluid liquid —D. A. Kompaneets. **38**(1), 125–8 (Jan. 1974); CPM-7405F0125

Kompanets, I. N.—Orienting effect of an electric field on nematic liquid crystals —P. D. Berezin, I. N. Kompanets, V. V. Nikitin, and S. A. Pikin. **37**(2), 305–8 (Aug. 1973); CPM-7404E0559

Kondorskiĭ, E. I.—Magnetic structure of copper-manganese alloys with exchange anisotropy —E. I. Kondorskiĭ, O. S. Galkina, and A. Dzhurakulov. **38**(6), 1153–5 (Jun. 1974)

Kondorskiĭ, E. N.—Anisotropy of Galvanomagnetic effects in single-crystal cobalt —E. N. Kondorskiĭ, O. S. Galkina, V. I. Ivanovskiĭ, A. V. Cheremushkina, and U. T. Usarov. **38**(5), 977–8 (May 1974)

Kondratenko, A. M.—Polarization kinetics of particles in storage rings —Ya. S. Derbenev and A. M. Kondratenko. **37**(6), 968–73 (Dec. 1973); CPM-7412X0016

Kondratenko, P. S.—High-temperature resistivity and the superconductivity of potassium and rubidium at high pressures — G. M. Gandelman, O. Yu. Itskovich, P. S. Kondratenko, I. P. Perstnev, and V. M. Finkelberg. **38**(1), 111–5 (Jan. 1974); CPM-7405F0111

Kononenko, N. I.—Effect of the multivalley structure of the conduction band on helical instability in the electron-hole plasma of silicon —V. M. Bondar, V. V. Vladimirov, N. I. Kononenko, O. G. Sarbeĭ, and A. I. Shchedrin. **38**(3), 542–4 (Mar. 1974); CPM-7411X0922

Kononets, Yu. V.—Theory of the channeling effect: II. Influence of inelastic collisions —Yu. Kagan and Yu. V. Kononets. **37**(3), 530–40 (Sep. 1973); CPM-7406X1538

Konopel'chenko, B. G.—Field theory of gravitational field sources — Yu. B. Rumer and B. G. Konopel'chenko. **37**(4), 568–71 (Oct. 1973); CPM-7407X1310

Konoplev, G. G.—Dependence of fluorescence characteristics on the spectral distribution of the intensity of the exciting electromagnetic field —V. G. Plotnikov and G. G. Konoplev. **38**(3), 476–81 (Mar. 1974); CPM-7411X0856

Konovalov, O. G.—Photoproduction of π mesons from C^{12} in the photon-energy range from 250 to 1200 MeV —N. V. Goncharov, A. I. Derebchinskiĭ, O. G. Konovalov, S. G. Tonapetyan, and V. M. Khvorostyan. **37**(1), 38–40 (Jul. 1973); CPM-7401D0740

—Polarization of protons from the $\gamma+p\to\pi^0+p$ reaction produced by 692–1028 MeV photons at 90° in the center-of-mass system —N. V. Goncharov, A. I. Derebchinskiĭ, A. A. Zybalov, O. G. Konovalov, A. E. Tenishev, S. G. Tonapetyan, and V. M. Khvorostyan. **37**(2), 205–7 (Aug. 1973); CPM-7404E0459

Kontorovich, V. M.—Symmetry properties of the collision integral and nonisotropic stationary solutions in weak turbulence theory — A. V. Kats and V. M. Kontorovich. **37**(1), 80–5 (Jul. 1973); CPM-7401D0782

—Anisotropic turbulent distributions for waves with a nondecay dispersion law —A. V. Kats and V. M. Kontorovich. **38**(1), 102–7 (Jan. 1974); CPM-7405F0102

—Scaling relation for phase transitions in a one-dimensional x-y model —V. I. Ponomarev, V. M. Kontorovich, and V. M. Tsukernik. **38**(3), 600–3 (Mar. 1974); CPM-7411X0980

Kontrosh, E. É.—Resonance effects in inelastic collisions of slow electrons with cadmium and zinc atoms —O. B. Shpenik, I. P. Zapesochnyĭ, V. V. Sovter, E. É. Kontrosh, and A. N. Zavilopulo. **38**(5), 898–902 (May 1974)

Kontsevoĭ, L. M.—Low frequency instabilities in a linear plasma betatron —E. I. Lutsenko, L. M. Kontsevoĭ, V. A. Bondarenko, and N. D. Sereda. **37**(3), 424–8 (Sep. 1973); CPM-7406X1432

Kopaev, Yu. V.—Theory of phase transitions in semiconductors of the A_4B_4group —V. A. Volkov and Yu. V. Kopaev. **37**(6), 1103–8 (Dec. 1973); CPM-7412X0151

—Theory of superconductivity in the presence of electron-hole pairing in semimetals at T=0 —A. I. Rusinov, Chan Kat Do, and Yu. V. Kopaev. **38**(5), 991–8 (May 1974)

—Theory of superconductivity in systems with an inverse distribution —V. F. Elesin, Yu. V. Kopaev, and R. Kh. Timerov. **38**(6), 1170–6 (Jun. 1974)

Kopasov, A. P.—Nonlinear effects due to the propagation of sound and electromagnetic waves in conductors in a quantizing magnetic field —V. Ya. Demikhovskiĭ and A. P. Kopasov. 37(3), 512–5 (Sep. 1973); CPM-7406X1520

Kopeliovich, A. I.—Low–temperature electrical conductivity of metals with closed Fermi surfaces —R. N. Gurzhi and A. I. Kopeliovich. 37(1), 195–200 (Jul. 1973); CPM-7401D0897

Kopnin, N. B.—Some features of viscous flow of vortices in superconducting alloys near the critical temperature—L. P. Gor'kov and N. B. Kopnin. 37(1), 183–9 (Jul. 1973); CPM-7401D0885

—Viscous flow of vortices in type–II superconducting alloys —L. P. Gor'kov and N. B. Kopnin. 38(1), 195–201 (Jan. 1974); CPM-7405F0195

Kopvillem, U. Kh.—Study of phase transitions in KD_3PO_4 single crystals by the acoustic magnetic resonance technique —Kh. G. Bogdanova, Yu. V. Vladimirtsev, V. A. Golenishchev–Kutuzov, and U. Kh. Kopvillem. 38(3), 505–8 (Mar. 1974); CPM-7411X0885

—Quadrupole phonon echo of a system of three–level particles in a cubic crystal field —U. Kh. Kopvillem and V. R. Rizaev. 38(6), 1147–52 (Jun. 1974)

Kopylov, V. N.—Investigation of the kinetic coefficients of bismuth at helium temperatures —V. N. Kopylov and L. P. Mezhov–Deglin. 38(2), 357–64 (Feb. 1974); CPM-7405F0575

Korablev, A. S.—Investigation of light amplification in a pulsed acetylene–air combustion gasdynamic laser —G. I. Kozlov, V. N. Ivanov, and A. S. Korablev. 38(1), 41–3 (Jan. 1974); CPM-7405F0041

Korenblit, I. Ya.—Effect of oscillating interaction between magnetic impurities on the properties of dilute magnetic alloys —I. Ya. Korenblit and E. F. Shender. 37(1), 159–63 (Jul. 1973); CPM-7401D0861

—Spin waves and density of states in disordered ferromagnetic substances —S. L. Ginzburg, I. Ya. Korenblit, and E. F. Shender. 37(6), 1141–7 (Dec. 1973); CPM-7412X0189

Korneev, E. V.—Magnetic structure and localization of Co^{2+} and Fe^{2+} ions in hexagonal ferrites —V. F. Belov, T. A. Khimich, M. N. Shipko, I. S. Zheludev, E. V. Korneev, and N. S. Ovanesyan. 37(6), 1089–95 (Dec. 1973); CPM-7412X0137

Kornienko, L. S.—Oscillation regimes in a rotating solid–state ring laser —E. L. Klochan, L. S. Kornienko, N. V. Kravtsov, E. G. Lariontsev, and A. N. Shelaev. 38(4), 669–74 (Apr. 1974); CPM-7502X0029

Korolyuk, A. P.—Dispersion of sound velocity and the electron relaxation time in bismuth and antimony —A. P. Korolyuk, M. A. Obolenskiĭ, and V. I. Beletskiĭ. 38(5), 979–82 (May 1974)

Korshunov, S. M.—Nonlinear interaction of space–charge waves with trapped electrons —A. A. Ivanov, S. M. Korshunov, N. S. Beryuleva, and S. P. Tarasov. 38(5), 927–30 (May 1974)

Kosichkin, Yu. V.—Influence of hydrostatic pressure on the splitting of the Landau levels in tellurium —V. B. Anzin, M. S. Bresler, E. S. Itskevich, Yu. V. Kosichkin, V. A. Sukhoparov, A. N. Tolmachev, and I. I. Farbshtein. 38(4), 755–8 (Apr. 1974); CPM-7502X0115

Kotyuzhanskiĭ, B. Ya.—Spin wave relaxation in antiferromagnetic $CsMnF_3$ —B. Ya. Kotyuzhanskiĭ and L. A. Prozorova. 38(6), 1233–7 (Jun. 1974)

Koval', A. G.—Mechanism of the luminescene of polymer films during their formation as a result of bombardment of solids with ion beams —V. V. Gritsyna, T. S. Kiyan, A. G. Koval', Ya. M. Fogel', A. L. Seryugin, and I. S. Martynov. 37(1), 108–12 (Jul. 1973); CPM-7401D0810

Kovalenko, V. A.—Self–transparency in gallium arsenide on two–photon interaction with an ultrashort light pulse —T. L. Gvardzhaladze, A. Z. Grasyuk, and V. A. Kovalenko. 37(2), 227–30 (Aug. 1973); CPM-7404E0481

Kovalev, V. I.—Influence of saturation on the amplification of light in stimulated Brillouin scattering —V. I. Kovalev, V. I. Popovichev, V. N. Ragul'skiĭ, and F. S. Faizullov. 37(6), 1023–4 (Dec. 1973); CPM-7412X0071

Koval'skiĭ, N. G.—Development of instability and the neutron emission by a Z–pinch —V. V. Aleksandrov, N. G. Koval'skiĭ, S. Yu. Lukyanov, V. A. Rantsev–Kartinov, and M. M. Stepanenko. 37(4), 622–4 (Oct. 1973); CPM-7407X1364

Kovner, L. M.—Theory of the Kondo effect at low temperatures —L. M. Kovner. 38(1), 151–5 (Jan. 1974); CPM-7405F0151

Kovsh, I. B.—Electric ionization lasers —N. G. Basov, É. M. Belenov, V. A. Danilychev, O. M. Kerimov, I. B. Kovsh, A. S. Podsosonnyĭ, and A. F. Suchkov. 37(1), 58–64 (Jul. 1973); CPM-7401D0760

Kovtun, N. M.—NMR investigation of $Gd_xY_{1-x}Fe_2$ compounds —V. A. Vasil'kovskiĭ, N. M. Kovtun, A. K. Kuprianov, S. A. Nikitin, and V. F. Ostrovskiĭ. 38(2), 342–4 (Feb. 1974); CPM-7405F0560

Kozlov, G. I.—Investigation of light amplification in a pulsed acetylene–air combustion gasdynamic laser —G. I. Kozlov, V. N. Ivanov, and A. S. Korablev. 38(1), 41–3 (Jan. 1974); CPM-7405F0041

Kozlov, N. I.—Similarity of photodissociation waves and experimental determination of the primary period of the photochemical process —B. L. Borovich, V. Ya. Karpov, N. I. Kozlov, and Yu. Yu. Stoĭlov. 37(4), 616–8 (Oct. 1973); CPM-7407X1358

Kozlov, V. A.—High intensity circularly polarized waves in nonlinear dispersive media —K. A. Gorshkov, V. A. Kozlov, and L. A. Ostrovskiĭ. 38(1), 93–5 (Jan. 1974); CPM-7405F0093

Kozub, V. I.—Nonlinear acoustic effects in superconductors —Yu. M. Gal'perin, V. L. Gurevich, and V. I. Kozub. 38(3), 517–24 (Mar. 1974); CPM-7411X0897

Krainov, B. N.—Susceptibility of copper–nickel alloys —V. E. Rode, A. Bluschke, B. N. Krainov, and A. I. Leichenko. 37(2), 280–2 (Aug. 1973); CPM-7404E0534

Krainov, V. P.—A hydrogen–like atom in a superstrong magnetic field —V. P. Krainov. 37(3), 406–7 (Sep. 1973); CPM-7406X1414

Krasnopolin, I. Ya.—Electron–phonon interaction and cyclotron resonance in lead —I. Ya. Krasnopolin and M. S. Khaikin. 37(5), 883–9 (Nov. 1973); CPM-7410X0223

Krasovitskiĭ, V. B.—On the nonlinear theory of the beam–plasma instability —V. B. Krasovitskiĭ. 37(5), 809–12 (Nov. 1973); CPM-7410X0149

Kravtsov, N. V.—Oscillation regimes in a rotating solid–state ring laser —E. L. Klochan, L. S. Kornienko, N. V. Kravtsov, E. G. Lariontsev, and A. N. Shelaev. 38(4), 669–74 (Apr. 1974); CPM-7502X0029

Kreĭnes, N. M.—The weak ferromagnetism of NiF_2 —A. S. Borovik–Romanov, A. N. Bazhan, and N. M. Kreĭnes. 37(4), 695–702 (Oct. 1973); CPM-7407X1437

—Magnetic birefringence of light in antiferromagnetic transition–metal fluorides —A. S. Borovik–Romanov, N. M. Kreĭnes, A. A. Pankov, and M. A. Talalaev. 37(5), 890–6 (Nov. 1973); CPM-7410X0230

Krepostnov, P. I.—Photodissociative I^{127} laser in a magnetic field —I. M. Belousova, B. D. Bobrov, V. M. Kiselev, V. N. Kurzenkov, and P. I. Krepostnov. 38(2), 258–63 (Feb. 1974); CPM-7405F0476

Krinchik, G. S.—Anomalous magnetooptical properties of bismuth–containing iron garnets —G. S. Krinchik, V. A. Krylova, E. V. Berdennikova, and R. A. Petrov. 38(2), 354–6 (Feb. 1974); CPM-7405F0572

—Quadratic magnetooptical reflection effects in ferromagnets —G. S. Krinchik and E. A. Gan'shina. 38(5), 983–7 (May 1974)

Krivoglaz, M. A.—Quantum theory of nonlinear oscillators interacting with the medium —M. I. Dykman and M. A. Krivoglaz. 37(3), 506–11 (Sep. 1973); CPM-7406X1514

Krivoshchekov, G. V.—Excitation of ultrashort light pulses in a ruby ring laser with resonance loss modulation —G. V. Krivoshchekov, L. A. Kulevskiĭ, N. G. Nikulin, V. M. Semibalamut, V. A. Smirnov, and V. V. Smirnov. 37(6), 1007–11 (Dec. 1973); CPM-7412X0055

Krokhin, O. N.—Photochemical decomposition waves —B. L. Borovich, V. S. Zuev, and O. N. Krokhin. 37(4), 602–4 (Oct. 1973); CPM-7407X1344

Kruglyakov, E. P.—Experiments on plasma confinement in a magnetic multimirror trap —G. I. Budker, V. V. Danilov, E. P. Kruglyakov, D. D. Ryutov, and E. V. Shunko. 38(2), 276–82 (Feb. 1974); CPM-7405F0494

Krumshtein, Z. V.—Search for structural effects in π^- meson capture by hydrogen in complex molecules —Z. V. Krumshtein, V. I. Petrukhin, V. E. Risin, L. M. Smirnova, V. M. Suvorov, and I. A. Yutlandov. 38(2), 222–3 (Feb. 1974); CPM-7405F0440

Krupchitskiĭ, P. A.—Violation of P parity in the reaction $^{113}Cd(n,\gamma)^{114}Cd$ —Yu. G. Abov, O. N. Ermakov, and P. A. Krupchitskiĭ. 38(5), 870–3 (May 1974)

Krupskiĭ, I. N.—Plastic deformation of solidified inert gases —I. N. Krupskiĭ, A. V. Leont'eva, and Yu. S. Stroilov. 38(5), 957–9 (May 1974)

Krupyanskiĭ, Yu. F.—Magnetic properties of ultrafine iron oxide particles —Yu. F. Krupyanskiĭ and I. P. Suzdalev. **38**(4), 859–64 (Apr. 1974); CPM-7502X0219

Krykin, M. A.—Size effect of kinetic coefficients in polycrystalline bismuth films —V. M. Abrosimov, B. N. Egorov, and M. A. Krykin. **37**(1), 113–6 (Jul. 1973); CPM-7401D0815

Krylov, I. P.—Radio-frequency size effect in a layer of normal metal bounded by its superconducting phase —I. P. Krylov and Yu. V. Sharvin. **37**(3), 481–6 (Sep. 1973); CPM-7406X1489

Krylova, V. A.—Anomalous magnetooptical properties of bismuth-containing iron garnets —G. S. Krinchik, V. A. Krylova, E. V. Berdennikova, and R. A. Petrov. **38**(2), 354–6 (Feb. 1974); CPM-7405F0572

Kryukov, P. G.—Direct observation of the picosecond structure of radiation pulses from a mode-locked neodymium laser —N. G. Basov, M. M. Butslov, P. G. Kryukov, Yu. A. Matveev, E. A. Smirnova, B. M. Stepanov, S. D. Fanchenko, S. V. Chekalin, and R. V. Chikin. **38**(3), 449–53 (Mar. 1974); CPM-7411X0829

Kucherov, V. I.—Electron beam excitation of regular oscillations in an inhomogeneous plasma waveguide —S. S. Kalmykova, V. I. Kurilko, V. I. Kucherov, and A. P. Tolstoluzhsky. **37**(2), 240–Q44 (Aug. 1973); CPM-7404E0494

Kugel', K. I.—Crystal structure and magnetic properties of substances with orbital degeneracy —K. I. Kugel' and D. I. Khomskiĭ. 37(4), 725–30 (Oct. 1973); CPM-7407X1467

Kulakov, V. M.—New data on the alpha decay of Cr^{249} —S. A. Baranov, V. M. Shatinskiĭ, V. M. Kulakov, and Yu. F. Rodionov. **37**(6), 993 (Dec. 1973); CPM-7412X0041

Kulevskiĭ, L. A.—Excitation of ultrashort light pulses in a ruby ring laser with resonance loss modulation —G. V. Krivoshchekov, L. A. Kulevskiĭ, N. G. Nikulin, V. M. Semibalamut, V. A. Smirnov, and V. V. Smirnov. **37**(6), 1007–11 (Dec. 1973); CPM-7412X0055

Kulik, I. O.—Surface-charge oscillations in superconductors —I. O. Kulik. **38**(5), 1008–10 (May 1974)

Kuprianov, A. K.—NMR investigation of $Gd_xY_{1-x}Fe_2$ compounds —V. A. Vasil'kovskiĭ, N. M. Kovtun, A. K. Kuprianov, S. A. Nikitin, and V. F. Ostrovskiĭ. **38**(2), 342–4 (Feb. 1974); CPM-7405F0560

Kuraev, É. A.—Radiative corrections to bremsstrahlung at high energies —É. A. Kuraev, L. N. Lipatov, N. P. Merenkov, and V. S. Fadin. **38**(6), 1076–8 (Jun. 1974)

Kurbatov, L. V.—Spin waves in an Heisenberg ferromagnetic substance with single-ion anisotropy —M. P. Kashchenko, N. F. Balakhonov, and L. V. Kurbatov. **37**(1), 201–4 (Jul. 1973); CPM-7401D0903

—Magnetic-field-induced interaction of collective excitations in a weak ferromagnet with single-ion anisotropy —V. N. Kitaev, M. P. Kaschenko, and L. V. Kurbatov. **38**(6), 1166–9 (Jun. 1974)

Kurilko, V. I.—Electron beam excitation of regular oscillations in an inhomogeneous plasma waveguide —S. S. Kalmykova, V. I. Kurilko, V. I. Kucherov, and A. P. Tolstoluzhsky. **37**(2), 240–Q44 (Aug. 1973); CPM-7404E0494

Kuritsin, V. B.—Nuclear magnetic resonance of V^{51} in a V_3Si single crystal —B. N. Tret'yakov, V. A. Marchenko, V. B. Kuritsin, and B..N. Kodess. **38**(4), 772–4 (Apr. 1974); CPM-7502X0132

Kurkin, M. I.—Nuclear spin motion with allowance for Suhl–Nakamura interaction —E. A. Turov, M. I. Kurkin, and V. V. Nikolaev. **37**(1), 147–53 (Jul. 1973); CPM-7401D0849

Kurzenkov, V. N.—Photodissociative I^{127} laser in a magnetic field —I. M. Belousova, B. D. Bobrov, V. M. Kiselev, V. N. Kurzenkov, and P. I. Krepostnov. **38**(2), 258–63 (Feb. 1974); CPM-7405F0476

Kuskova, N. V.—Temperature dependence of the viscosity of binary solutions near the critical solution temperature —N. V. Kuskova and E. V. Matizen. **37**(3), 501–3 (Sep. 1973); CPM-7406X1509

Kvirikadze, A. G.—Damping of spin waves in antiferromagnetic substances with magnetic anisotropy of the "easy plane" type —V. G. Bar'yakhtar, V. L. Sobolev, and A. G. Kvirikadze. **38**(2), 392–8 (Feb. 1974); CPM-7405F0610

L

Lakoza, E. L.—Critical fluctuations in external fields —E. L. Lakoza, V. M. Sysoev, and A. V. Chalyĭ. **38**(2), 298–303 (Feb. 1974); CPM-7405F0516

Landau, I. L.—Paramagnetic effect in type-I superconductors —I. L. Landau. 37(2), 285–9 (Aug. 1973); CPM-7404E0539

Lapidus, L. I.—Structure functions of deep inelastic ep scattering —S. I. Bilen'kaya, S. M. Bilen'kiĭ, Yu. M. Kazarinov, and L. I. Lapidus. **38**(5), 874–8 (May 1974)

Lariontsev, E. G.—Oscillation regimes in a rotating solid-state ring laser —E. L. Klochan, L. S. Kornienko, N. V. Kravtsov, E. G. Lariontsev, and A. N. Shelaev. **38**(4), 669–74 (Apr. 1974); CPM-7502X0029

Larkin, A. I.—Resistance of superconductors near the critical field strength H_{c2} —A. I. Larkin and Yu. N. Ovchinnikov. 37(3), 557–60 (Sep. 1973); CPM-7406X1565

—Correlation functions for a one-dimensional Fermi system with long-range interaction (Tomonaga model) —I. E. Dzyaloshinskiĭ and A. I. Larkin. **38**(1), 202–8 (Jan. 1974); CPM-7405F0202

—Electrodynamics of inhomogeneous type-II superconductors —A. I. Larkin and Yu. N. Ovchinnikov. **38**(4), 854–8 (Apr. 1974); CPM-7502X0214

Latush, E. L.—Laser recombination transitions in CA II and Sr II — E. L. Latush and M. F. Sém. **37**(6), 1017–8 (Dec. 1973); CPM-7412X0065

Laukhin, V. N.—Effect of high uniform pressure and residual stress on the superconductivity of alloys of the $V_3(Si_{1-x}Ge_x)$ system —A. G. Rabinkin, V. N. Galev, and V. N. Laukhin. **37**(5), 870–4 (Nov. 1973); CPM-7410X0210

—Phase transition induced in KCl by pressure at low temperatures — V. N. Laukhin, A. G. Rabin'kin, and É. I. Estrin. **37**(6), 1150–2 (Dec. 1973); CPM-7412X0198

Laval, G.—Interaction between an intense electromagnetic wave and a plasma —A. A. Galeev, G. Laval, T. O'Neil, M. N. Rosenbluth, and R. Z. Sagdeev. **38**(3), 482–9 (Mar. 1974); CPM-7411X0862

Lavrova, V. V.—Surface resistance of cadmium in a magnetic field — V. V. Lavrova, S. V. Medvedev, V. G. Skobov, L. M. Fisher, and V. A. Yudin. **37**(5), 929–36 (Nov. 1973); CPM-7410X0269

—Surface resistance of a cadmium plate in a magnetic field —V. V. Lavrova, S. V. Medvedev, V. G. Skobov, L. M. Fisher, and V. A. Yudin. **38**(2), 349–53 (Feb. 1974); CPM-7405F0567

Lavrovskiĭ, V. A.—Investigation of the mechanism of excitation of stochastic oscillations in a beam–plasma discharge —V. A. Lavrovskiĭ, I. F. Kharchenko, and E. G. Shustin. **38**(6), 1117–23 (Jun. 1974)

Lazurik–El'tsufin, V. T.—Excitation of acoustic oscillations by a low density beam of charged particles —A. I. Kalinichenko and V. T. Lazurik–El'tsufin. **38**(6), 1181–3 (Jun. 1974)

Lazuta, A. V.—Dynamics of impurity spin in a dielectric —A. V. Lazuta and S. V. Maleev. **38**(5), 1038–42 (May 1974)

Leĭchenko, A. I.—Susceptibility of copper–nickel alloys —V. E. Rode, A. Bluschke, B. N. Krainov, and A. I. Leĭchenko. **37**(2), 280–2 (Aug. 1973); CPM-7404E0534

Leĭko, G. A.—Interaction of protons and hydrogen atoms with CO molecules —V. V. Afrosimov, G. A. Leĭko, Yu. A. Mamaev, M. N. Panov, and M. Vuĭovich. **38**(2), 243–7 (Feb. 1974); CPM-7405F0461

Lelyakov, A. V.—Bose–Einstein condensation of dipole–active excitons and photons —S. A. Moskalenko, M. F. Miglei, M. I. Shmiglyuk, P. I. Khadzhi, and A. V. Lelyakov. **37**(5), 902–8 (Nov. 1973); CPM-7410X0242

Leont'eva, A. V.—Plastic deformation of solidified inert gases —I. N. Krupskiĭ, A. V. Leont'eva, and Yu. S. Stroilov. **38**(5), 957–9 (May 1974)

Letokhov, V. S.—Excitation of vibrational levels in the $N^{14}H_3$ molecule by radiation from a CO_2 laser —R. V. Ambartsumyan, V. S. Letokhov, G. N. Markarov, A. G. Platova, A. A. Puretskiĭ, and O. A. Tumanov. **37**(3), 392–8 (Sep. 1973); CPM-7406X1400

—Nonlinear narrow density resonances of excited molecules in a standing light wave —V. S. Letokhov and B. D. Pavlik. **37**(3), 408–12 (Sep. 1973); CPM-7406X1416

—On the problem of the nuclear–transition γ-laser —V. S. Letokhov. 37(5), 787–93 (Nov. 1973); CPM-7410X0127

Levchenko, Yu. Z.—Composition of the slow ions produced upon ionization of gases by high energy protons —Yu. Z. Levchenko, L. I. Pivovar, and G. D. Tolstolutskaya. **37**(6), 1004–6 (Dec. 1973); CPM-7412X0052

Levchenkova, L. G.—The de Haas–van Alphen effect and damping of helicons during plastic deformation in aluminum —E. P. Vol'skiĭ, L. G. Levchenkova, and V. T. Petrashov. **38**(1), 156–7 (Jan. 1974); CPM-7405F0156

Levin, M. L.—"Kirchhoff" form of fluctuation–dissipation theorem for distributed systems —M. L. Levin and S. M. Rytov. **38**(4), 688–92 (Apr. 1974); CPM-7502X0048

Levin, V. M.—Phonon transition radiation —V. M. Levin, V. I. Pustovoĭt, and L. A. Chernozatonskiĭ. **37**(5), 909–13 (Nov. 1973); CPM-7410X0249

Levinson, I. B.—Fine structure of cyclotron–phonon resonance lines —R. K. Bakanas, I. B. Levinson, and A. Yu. Matulis. 37(3), 541–4 (Sep. 1973); CPM-7406X1549
—Distribution of hot phonons generated by laser radiation —I. B. Levinson. 38(1), 162–6 (Jan. 1974); CPM-7405F0162
Levitin, R. Z.—Magnetic anisotropy of the uranium compounds UAsS and UAsSe —K. P. Belov, A. S. Dmitrievskiĭ, A. Zygmunt, R. Z. Levitin, and V. Trzebiatowski. 37(2), 297–8 (Aug. 1973); CPM-7404E0551
—Investigation of magnetic properties of monocrystals of the uranium compounds U_3P_4 and U_3As_4 in strong fields —K. P. Belov, Z. Genke, A. S. Dmitrievskiĭ, R. Z. Levitin, and W. Trzebiatowski. 37(4), 686–8 (Oct. 1973); CPM-7407X1428
Liberman, M. A.—Recombination of the role of negative ions in a high–frequency gas discharge —M. A. Liberman and B. É. Meierovich. 37(6), 1066–70 (Dec. 1973); CPM-7412X0114
Lifshitz, I. M.—Contribution to the statistical thermodynamics fusion of long heteropolymer chains —I. M. Lifshitz. 38(3), 545–9 (Mar. 1974); CPM-7411X0925
—State diagram of a polymer globule and the problem of self–organization of its spatial structure —I. M. Lifshitz and A. Yu. Grosberg. 38(6), 1198–208 (Jun. 1974)
Likhter, A. I.—Effect of pressure on the Fermi surface of zinc —V. A. Venttsel', C. A. Voronov, A. I. Likhter, and A. V. Rudnev. 38 (6), 1220–4 (Jun. 1974)
Lipatov, L. N.—Radiative corrections to bremsstrahlung at high energies —É. A. Kuraev, L. N. Lipatov, N. P. Merenkov, and V. S. Fadin. 38(6), 1076–8 (Jun. 1974)
Lisitsa, V. S.—Theory of Stark broadening of hydrogen lines in plasma —G. V. Sholin, A. V. Demura, and V. S. Lisitsa. 37(6), 1057–65 (Dec. 1973); CPM-7412X0105
—Two–level system with damping in a plasma —V. I. Kogan, V. S. Lisitsa, and A. D. Selidovkin. 38(1), 75–82 (Jan. 1974); CPM-7405F0075
—Term intersection in multiparticle interactions —V. S. Lisitsa. 38(3), 435–8 (Mar. 1974); CPM-7411X0815
Litvak–Gorskaya, L. B.—Singularities of energy states of localized electrons in strongly compensated n–InSb —V. V. Arendarchuk, E. M. Gershenzon, L. B. Litvak–Gorskaya, and R. I. Rabinovich. 38 (6), 1192–7 (Jun. 1974)
Litvinenko, Yu. G.—Exciton–magnon absorption of light in antiferromagnetic siderite —V. V. Eremenko, Yu. G. Litvinenko, A. A. Motornaya, V. I. Myatlik, and V. V. Shapiro. 38(3), 608–12 (Mar. 1974); CPM-7411X0988
Logvinenko, V. P.—Thin layers in acoustics and optics. changes in the transmission and reflection of sound and light on creation of a thin gas layer on the surface of a body in a liquid —G. A. Askar'yan, É. F. Bolshakov, E. Ya. Golts, and V. P. Logvinenko. 37(4), 587–9 (Oct. 1973); CPM-7407X1329
Lomonos, O. I.—Resistivities of rubidium and potassium at helium temperatures —B. N. Aleksandrov, O. I. Lomonos, and E. D. Semenova. 37(2), 294–6 (Aug. 1973); CPM-7404E0548
—Deviations from the Matthiessen rule in the temperature range 2 to 14°K in Sn, In, Hg, and Ti containing small quantities of impurities —O. I. Lomonos and B. N. Aleksandrov. 37(6), 1137–40 (Dec. 1973); CPM-7412X0185
Lomonosov, V. V.—Electron diffraction in a strong field by dielectric crystals —D. F. Zaretskiĭ and V. V. Lomonosov. 38(1), 140–2 (Jan. 1974); CPM-7405F0140
Lordkipanidze, D. Sh.—Spontaneous electroabsorption in cadmium telluride and gallium arsenide —R. M. Akopyan, Yu. N. Berozashvili, A. V. Dundua, and D. Sh. Lordkipanidze. 38(5), 1003–7 (May 1974)
Lorikyan, M. P.—Transition–radiation detection of particles —M. P. Lorikyan. 38(4), 661–2 (Apr. 1974); CPM-7502X0021
—Investigation of x–ray transition radiation in foamed plastic —A. I. Alikhanyan, É. S. Belyakov, M. P. Lorikyan, K. Jh. Makaryan, and K. K. Shikhlyarov. 38(4), 663–5 (Apr. 1974); CPM-7502X0023
Lozenko, A. F.—Antiferromagnetic resonance in layered $CoCl_2$ and $NiCl_2$ crystals —A. F. Lozenko and S. M. Ryabchenko. 38(3), 538–41 (Mar. 1974); CPM-7411X0918
Lugovoĭ, V. N.—Passage of weak Gaussian beam through a nonlinear medium —V. N. Lugovoĭ. 38(3), 439–42 (Mar. 1974); CPM-7411X0819
—On the multifocus structure of light beams in nonlinear media —A. L. Dyshko, V. N. Lugovoĭ, and A. M. Prokhorov. 38(4), 680–3 (Apr. 1974); CPM-7502X0040
—Acoustic perturbations in a medium by the motion of a light focus —V. N. Lugovoĭ and V. N. Strel'tsov. 38(4), 701–4 (Apr. 1974); CPM-7502X0061
Lukash, V. N.—The isotropization of homogeneous cosmological models —A. G. Doroshkevich, V. N. Lukash, and I. D. Novikov. 37(5), 739–46 (Nov. 1973); CPM-7410X0079
Luk'yanchuk, A. N.—Interaction between a high frequency magnetic field and potential plasma oscillations in a Q–device —L. L. Artsimovich, A. A. Ivanov, A. N. Luk'yanchuk, V. L. Papernyĭ, V. D. Rusanov, and S. S. Sobolev. 37(2), 236–9 (Aug. 1973); CPM-7404E0490
Lukyanov, S. Yu.—Development of instability and the neutron emission by a Z–pinch —V. V. Aleksandrov, N. G. Koval'skiĭ, S. Yu. Lukyanov, V. A. Rantsev–Kartinov, and M. M. Stepanenko. 37(4), 622–4 (Oct. 1973); CPM-7407X1364
Lushchikov, V. I.—Production of very cold neutrons —V. V. Golikov, V. I. Lushchikov, and F. L. Shapiro. 37(1), 41–4 (Jul. 1973); CPM-7401D0743
Lutsenko, E. I.—Low frequency instabilities in a linear plasma betatron —E. I. Lutsenko, L. M. Kontsevoĭ, V. A. Bondarenko, and N. D. Sereda. 37(3), 424–8 (Sep. 1973); CPM-7406X1432
Lutsishin, P. P.—Reflection of conduction electrons from an atomically pure (110) face a of a tungsten crystal —P. P. Lutsishin, O. A. Panchenko, and A. A. Kharlamov. 37(6), 1083–5 (Dec. 1973); CPM-7412X0131
L'vov, V. S.—Nonlinear theory of the parametric instability of waves in a plasma —V. S. L'vov and A. M. Rubenchik. 37(2), 263–8 (Aug. 1973); CPM-7404E0517
—Theory of magnetization self–oscillations on parametric excitation of spin waves —V. S. L'vov, S. L. Musher, and S. S. Starobinets. 37 (3), 546–51 (Sep. 1973); CPM-7406X1554
Lyakhov, G. A.—The possibility of creating artificial media possessing optical activity —G. A. Lyakhov. 37(3), 390–1 (Sep. 1973); CPM-7406X1398
Lysenko, V. A.—Absorption and dispersion of ultrasound and hypersound in glycerine —A. A. Berdyev, V. A. Lysenko, and B. Khemraev. 38(3), 515–6 (Mar. 1974); CPM-7411X0895
Lyubimov, O. I.—Possibility of propagation of dopplerons in metals with an open Fermi surface —É. A. Kaner and O. I. Lyubimov. 38 (2), 386–91 (Feb. 1974); CPM-7405F0604
Lyuboshitz, V. L.—Group Velocity and the macrocausality conditions for the "forward" scattering amplitude —V. L. Lyuboshitz. 38(4), 655–60 (Apr. 1974); CPM-7502X0015

M

Makarov, E. F.—Vibrational relaxation of HF and DF in a shock wave —G. K. Vasil'ev, E. F. Makarov, V. G. Papin, and V. L. Tal'rose. 37(6), 1031–3 (Dec. 1973); CPM-7412X0079
Makaryan, K. Jh.—Investigation of x–ray transition radiation in foamed plastic —A. I. Alikhanyan, É. S. Belyakov, M. P. Lorikyan, K. Jh. Makaryan, and K. K. Shikhlyarov. 38(4), 663–5 (Apr. 1974); CPM-7502X0023
Makaryunas, K. V.—"Anomalous" variation of the Mossbauer isomer shift of Te^{125} in defective diamond–like semiconductors —K. V. Makaryunas, A. K. Dragunas, and M. L. Adominaĭte. 37(3), 449–51 (Sep. 1973); CPM-7406X1457
Makeev, V. S.—Instability of a narrow electron–beam interacting with a plasma —V. S. Makeev. 38(4), 720–2 (Apr. 1974); CPM-7502X0080
Maksimenkov, P. P.—Antiferromagnetic resonance investigation of the magnetoelastic interaction in hematite —P. P. Maksimenkov and V. I. Ozhogin. 38(2), 324–8 (Feb. 1974); CPM-7405F0542
Maksimov, L. A.—Kinetic phenomena in a Knudsen gas with rotational degrees of freedom —V. D. Borman, L. A. Maksimov, B. I. Nikolaev, and V. I. Troyan. 37(2), 269–73 (Aug. 1973); CPM-7404E0523
—Theory of particle transfer in extremely narrow bands —Yu. Kagan and L. A. Maksimov. 38(2), 307–11 (Feb. 1974); CPM-7405F0525
Maleev, S. V.—Diffusion of magnetization in a Heisenberg ferromagnet above the Curie point —S. V. Maleev. 38(3), 613–9 (Mar. 1974); CPM-7411X0993
—Dynamics of impurity spin in a dielectric —A. V. Lazuta and S. V. Maleev. 38(5), 1038–42 (May 1974)
Malomuzh, N. P.—Hydrodynamic asymptotic form of the rotational–motion correlation function of a molecule in a liquid — I. Z. Fisher, A. V. Zatovskiĭ, and N. P. Malomuzh. 38(1), 146–50 (Jan. 1974); CPM-7405F0146

Mal'tsev, A. A.—Spectroscopy of vapors of low-volatility compounds supercooled in a supersonic stream —D. I. Kataev and A. A. Mal'tsev. 37(5), 772–7 (Nov. 1973); CPM-7410X0112

Mamaev, Yu. A.—Interaction of protons and hydrogen atoms with CO molecules —V. V. Afrosimov, G. A. Leiko, Yu. A. Mamaev, M. N. Panov, and M. Vuiovich. 38(2), 243–7 (Feb. 1974); CPM-7405F0461

Mamedov, T. G.—Effect of donor–donor and donor–acceptor interactions on the decay kinetics of the metastable state of Nd^{3+} in crystals —Yu. K. Voron'ko, T. G. Mamedov, V. V. Osiko, M. I. Timoshechkin, and I. A. Shcherbakov. 38(3), 565–72 (Mar. 1974); CPM-7411X0945

Mamsurova, L. G.—Specific heat of the antiferromagnetic garnet $Ca_3Mn_2Ge_3O_{12}$ —K. P. Belov, T. V. Valyanskaya, L. G. Mamsurova, and V. I. Sokolov. 38(3), 561–4 (Mar. 1974); CPM-7411X0941

Mamyrin, B. A.—The mass-reflectron, a new nonmagnetic time-of-flight mass spectrometer with high resolution —B. A. Mamyrin, V. I. Karataev, D. V. Shmikk, and V. A. Zagulin. 37(1), 45–8 (Jul. 1973); CPM-7401D0747

Manakov, N. L.—Cross sections for multiphoton ionization of alkali metal atoms —G. A. Delone, N. B. Delone, V. K. Zolotarev, N. L. Manakov, G. K. Piskova, and M. A. Tursunov. 38(2), 236–8 (Feb. 1974); CPM-7405F0454

Manakov, S. V.—On the theory of two-dimensional stationary self-focusing of electromagnetic waves —S. V. Manakov. 38(2), 248–53 (Feb. 1974); CPM-7405F0466

—Nonlinear Fraunhofer diffraction —S. V. Manakov. 38(4), 693–6 (Apr. 1974); CPM-7502X0053

Man'kov, Yu. I.—Electric conductivity of ferromagnets with a domain structure —Yu. V. Zakharov, Yu. I. Man'kov, and R. G. Khlebopros. 38(1), 119–22 (Jan. 1974); CPM-7405F0119

Mansfel'd, G. D.—Peculiarities in the amplification of ultrasound in n-InSb in strong magnetic fields —S. N. Ivanov and G. D. Mansfel'd. 37(6), 1096–8 (Dec. 1973); CPM-7412X0144

Marchenko, V. A.—Nuclear magnetic resonance of V^{51} in a V_3Si single crystal —B. N. Tret'yakov, V. A. Marchenko, V. B. Kuritsin, and B..N. Kodess. 38(4), 772–4 (Apr. 1974); CPM-7502X0132

Marinov, M. S.—The phase method for the Dirac equation and the calculation of the critical nuclear charge —M. S. Marinov and V. S. Popov. 38(6), 1069–75 (Jun. 1974)

Markarov, G. N.—Excitation of vibrational levels in the $N^{14}H_3$ molecule by radiation from a CO_2 laser —R. V. Ambartsumyan, V. S. Letokhov, G. N. Markarov, A. G. Platova, A. A. Puretskiĭ, and O. A. Tumanov. 37(3), 392–8 (Sep. 1973); CPM-7406X1400

Markin, A. P.—Relativistic photoeffect in the H_2 molecule —I. G. Kaplan and A. P. Markin. 37(2), 216–22 (Aug. 1973); CPM-7404E0470

Markin, E. P.—Stimulation of chemical reactions by laser radiation —N. G. Basov, E. M. Belenov, E. P. Markin, A. N. Oraevskiĭ, and A. V. Pankratov. 37(2), 247–52 (Aug. 1973); CPM-7404E0501

Markov, M. A.—On the regularizing role of a gravitational field — M. A. Markov. 37(4), 561–3 (Oct. 1973); CPM-7407X1303

Markov, V. B.—Frequency tunable of giant pulses in spectrally inhomogeneous media —V. B. Markov, T. Ya. Marusiĭ, M. S. Soskin, and A. I. Khizhnyak. 37(5), 778–83 (Nov. 1973); CPM-7410X0118

Markova, I. A.—Investigation of the electronic mechanism of the isomorphic phase transition in cerium —V. A. Shaburov, I. M. Band, A. I. Grushko, T. B. Mezentseva, E. V. Petrovich, Yu. P. Smirnov, A. E. Sovestnov, O. I. Sumbaev, M. B. Trzhaskovskaya, and I. A. Markova. 38(3), 573–81 (Mar. 1974); CPM-7411X0953

Martsenyuk, M. A.—On the kinetics of magnetization of suspensions of ferromagnetic particles —M. A. Martsenyuk, Yu. L. Raĭkher, and M. I. Shliomis. 38(2), 413–6 (Feb. 1974); CPM-7405F0631

Martynov, I. S.—Mechanism of the luminescene of polymer films during their formation as a result of bombardment of solids with ion beams —V. V. Gritsyna, T. S. Kiyan, A. G. Koval', Ya. M. Fogel', A. L. Seryugin, and I. S. Martynov. 37(1), 108–12 (Jul. 1973); CPM-7401D0810

Marusiĭ, T. Ya.—Frequency tunable of giant pulses in spectrally inhomogeneous media —V. B. Markov, T. Ya. Marusiĭ, M. S. Soskin, and A. I. Khizhnyak. 37(5), 778–83 (Nov. 1973); CPM-7410X0118

Matizen, E. V.—Temperature dependence of the viscosity of binary solutions near the critical solution temperature —N. V. Kuskova and E. V. Matizen. 37(3), 501–3 (Sep. 1973); CPM-7406X1509

Matulis, A. Yu.—Fine structure of cyclotron–phonon resonance lines —R. K. Bakanas, I. B. Levinson, and A. Yu. Matulis. 37(3), 541–4 (Sep. 1973); CPM-7406X1549

Matveenko, A. V.—Oscillations in the total cross section for the charge-exchange reaction pe+d→de+p —A. V. Matveenko. 38 (6), 1082–4 (Jun. 1974)

Matveev, V. M.—Quantum quadrupolar magnetism and phase transitions in the presence of biquadratic exchange —V. M. Matveev. 38(4), 813–8 (Apr. 1974); CPM-7502X0173

Matveev, Yu. A.—Direct observation of the picosecond structure of radiation pulses from a mode-locked neodymium laser —N. G. Basov, M. M. Butslov, P. G. Kryukov, Yu. A. Matveev, E. A. Smirnova, B. M. Stepanov, S. D. Fanchenko, S. V. Chekalin, and R. V. Chikin. 38(3), 449–53 (Mar. 1974); CPM-7411X0829

—Effect of anomalies of the energy spectrum on relaxation phenomena in helium II —Yu. A. Matveev. 38(3), 582–6 (Mar. 1974); CPM-7411X0962

Matyugin, Yu. A.—Spectroscopy of two-quantum transitions in a gas near resonances —I. M. Beterov, Yu. A. Matyugin, and V. P. Chebotaev. 37(5), 756–63 (Nov. 1973); CPM-7410X0096

Mazalov, Yu. P.—Control of instability development in multibeam systems —V. D. Fedorchenko, Yu. P. Mazalov, A. S. Bakaĭ, and B. N. Rutkevich. 38(6), 1111–6 (Jun. 1974)

Medvedev, M. V.—Effect of the low-frequency peaks of the phonon state density on the critical temperature of superconductors —M. V. Medvedev, É. A. Pashitskiĭ, and Yu. S. Pyatiletov. 38(3), 587–92 (Mar. 1974); CPM-7411X0967

Medvedev, S. V.—Surface resistance of cadmium in a magnetic field —V. V. Lavrova, S. V. Medvedev, V. G. Skobov, L. M. Fisher, and V. A. Yudin. 37(5), 929–36 (Nov. 1973); CPM-7410X0269

—Surface resistance of a cadmium plate in a magnetic field —V. V. Lavrova, S. V. Medvedev, V. G. Skobov, L. M. Fisher, and V. A. Yudin. 38(2), 349–53 (Feb. 1974); CPM-7405F0567

Medvedev, Yu. V.—Excitation of oscillations of charge carrier density in a tunnel junction —Yu. M. Ivanchenko and Yu. V. Medvedev. 37(3), 520–4 (Sep. 1973); CPM-7406X1528

Meierovich, A. E.—Structure of shock waves —A. F. Andreev and A. E. Meierovich. 37(5), 829–34 (Nov. 1973); CPM-7410X0169

Meierovich, B. E.—Theory of the anomalous skin effect in a plasma with a diffuse boundary —S. M. Dikman and B. E. Meĭerovich. 37(5), 835–43 (Nov. 1973); CPM-7410X0175

—Recombination of the role of negative ions in a high-frequency gas discharge —M. A. Liberman and B. É. Meierovich. 37(6), 1066–70 (Dec. 1973); CPM-7412X0114

Melikov, Yu. V.—A possibility of employing the shadow effect for studying the decay of quasistationary states —N. V. Eremin, Yu. V. Melikov, and A. F. Tulinov. 38(3), 433–4 (Mar. 1974); CPM-7411X0813

Mel'nikov, L. Yu.—Paramagnetic relaxation due to plasma oscillations of the current carriers —M. F. Deigen, L. A. Suslin, and L. Yu. Mel'nikov. 38(4), 824–6 (Apr. 1974); CPM-7502X0184

Mel'nikov, V. I.—Polarons in the strong coupling limit —V. I. Mel'nikov and G. E. Volovik. 38(4), 819–23 (Apr. 1974); CPM-7502X0179

Merenkov, N. P.—Radiative corrections to bremsstrahlung at high energies —É. A. Kuraev, L. N. Lipatov, N. P. Merenkov, and V. S. Fadin. 38(6), 1076–8 (Jun. 1974)

Mezentseva, T. B.—Investigation of the electronic mechanism of the isomorphic phase transition in cerium —V. A. Shaburov, I. M. Band, A. I. Grushko, T. B. Mezentseva, E. V. Petrovich, Yu. P. Smirnov, A. E. Sovestnov, O. I. Sumbaev, M. B. Trzhaskovskaya, and I. A. Markova. 38(3), 573–81 (Mar. 1974); CPM-7411X0953

Mezhov-Deglin, L. P.—Investigation of the kinetic coefficients of bismuth at helium temperatures —V. N. Kopylov and L. P. Mezhov-Deglin. 38(2), 357–64 (Feb. 1974); CPM-7405F0575

Miglei, M. F.—Bose–Einstein condensation of dipole-active excitons and photons —S. A. Moskalenko, M. F. Miglei, M. I. Shmiglyuk, P. I. Khadzhi, and A. V. Lelyakov. 37(5), 902–8 (Nov. 1973); CPM-7410X0242

Mikhaĭlov, A. I.—Relativistic compton effect on the bound electron —V. G. Gorshkov, A. I. Mikhaĭlov, and S. G. Sherman. 37(4), 572–8 (Oct. 1973); CPM-7407X1314

Mikhaĭlovskiĭ, A. B.—Contribution to the theory of local hydromagnetic stability of toroidal plasma configurations —A. B. Mikhaĭlovskiĭ. 37(2), 274–9 (Aug. 1973); CPM-7404E0528

Mikhaĭlovskiĭ, I. M.—Influence of resonance charge exchange on the resolution and contrast of a field–ion image —P. A. Bereznyak and I. M. Mikhaĭlovskiĭ. **38**(2), 233–5 (Feb. 1974); CPM-7405F0451

Mikheev, V. A.—Spin diffusion in solid He^3–He^4 solutions —V. N. Grigor'ev, B. N. Esel'son, and V. A. Mikheev. **37**(2), 309–10 (Aug. 1973); CPM-7404E0563

Mirzababaev, R. M.—Suppression effect under conditions of purely nuclear Laue diffraction of resonant γ rays —V. V. Sklyarevskiĭ, G. V. Smirnov, A. N. Artem'ev, R. M. Mirzababaev, and E. P. Stepanov. **37**(3), 474–5 (Sep. 1973); CPM-7406X1482

Mishin, A. G.—Transport theory of the interaction of ultrasound with conduction electrons —P. E. Zil'berman and A. G. Mishin. **38**(4), 733–7 (Apr. 1974); CPM-7502X0093

Mityakov, N. A.—Stimulated temperature scattering of electromagnetic waves in a plasma with collisions —N. A. Mityakov, M. I. Rabinovich, V. O. Rapoport, and L. E. Shtil'man. **38**(5), 944–6 (May 1974)

Mkhitaryan, A. Kh.—Radiation by electrons due to roughness of a metallic surface —F. R. Arutyunyan, A. Kh. Mkhitaryan, R. A. Oganesyan, and B. O. Rostomyan. **38**(5), 886–90 (May 1974)

Mkrtchyan, M. M.—Collision–radiative processes and molecular lasers —M. M. Mkrtchyan, V. T. Platonenko, and R. V. Khokhlov. **38**(1), 71–4 (Jan. 1974); CPM-7405F0071

Moiseev, S. S.—Wave transformation in an inhomogeneous unstable plasma —N. S. Erokhin and S. S. Moiseev. **38**(4), 712–9 (Apr. 1974); CPM-7502X0072

Monarkha, Yu. P.—Free electrons on the surface of liquid helium in the presence of external fields —V. B. Shikin and Yu. P. Monarkha. **38**(2), 373–7 (Feb. 1974); CPM-7405F0591

Monosov, Ya. A.—Susceptibility of the ferrite spin system above the parametric excitation threshold —Ya. A. Monosov, V. V. Surin, and V. A. Shakhunov. **38**(5), 951–3 (May 1974)

Morozova, E. A.—Fine structure of stimulated Raman scattering line in substances with small kerr constants —E. A. Morozova, A. I. Sokolovskaya, and M. M. Suschinskiĭ. **38**(6), 1079–81 (Jun. 1974)

Moskalenko, A. M.—Perturbation of a magnetized plasma by a rapidly moving charge —A. P. Dubovoĭ and A. M. Moskalenko. **37**(1), 77–9 (Jul. 1973); CPM-7401D0779

Moskalenko, S. A.—Bose–Einstein condensation of dipole–active excitons and photons —S. A. Moskalenko, M. F. Migleĭ, M. I. Shmiglyuk, P. I. Khadzhi, and A. V. Lelyakov. **37**(5), 902–8 (Nov. 1973); CPM-7410X0242

Motornaya, A. A.—Exciton–magnon absorption of light in antiferromagnetic siderite —V. V. Eremenko, Yu. G. Litvinenko, A. A. Motornaya, V. I. Myatlik, and V. V. Shapiro. **38**(3), 608–12 (Mar. 1974); CPM-7411X0988

Musher, S. L.—Theory of magnetization self–oscillations on parametric excitation of spin waves —V. S. L'vov, S. L. Musher, and S. S. Starobinets. **37**(3), 546–51 (Sep. 1973); CPM-7406X1554

—Kinetics of stimulated scattering of Langmuir waves by plasma ions —B. N. Breizman, V. E. Zakharov, and S. L. Musher. **37**(4), 658–65 (Oct. 1973); CPM-7407X1400

Myatlik, V. I.—Exciton–magnon absorption of light in antiferromagnetic siderite —V. V. Eremenko, Yu. G. Litvinenko, A. A. Motornaya, V. I. Myatlik, and V. V. Shapiro. **38**(3), 608–12 (Mar. 1974); CPM-7411X0988

N

Nabatov, A. V.—Stabilization of microdomain configurations in two–layer magnetic films —N. M. Salanskiĭ, V. A. Serëdkin, V. A. Burmakin, and A. V. Nabatov. **38**(5), 1011–2 (May 1974)

Nadirashvili, Z. Sh.—Critical velocities for vortex formation by an oscillating disc in helium II and relaxation processes during it rotation —Z. Sh. Nadirashvili and Dzh. S. Tsakadze. **37**(5), 844–7 (Nov. 1973); CPM-7410X0184

Nagorskiĭ, G. A.—Stable motion and acceleration of a charged particle in a linearly polarized electromagnetic wave in a gaseous medium —G. A. Nagorskiĭ and Yu. F. Orlov. **37**(3), 387–9 (Sep. 1973); CPM-7406X1395

Napartovich, P.—Phase transitions in a monolayer on the surface of a metal —L. A. Bol'shov and P. Napartovich. **37**(4), 713–7 (Oct. 1973); CPM-7407X1455

Narozhnyĭ, N. B.—Pair production by a periodic electric field —N. B. Narozhnyĭ and A. I. Nikishov. **38**(3), 427–32 (Mar. 1974); CPM-7411X0807

Natadze, A. L.—Influence of the dynamic Jahn–Teller effect on the structure of quartet terms of the tetrahedrally coordinated ion $Co^{2+}(ZnS—Co)$ —A. I. Ryskin, A. L. Natadze, and S. A. Kazanskiĭ. **37**(3), 462–6 (Sep. 1973); CPM-7406X1470

Nedorezov, S. S.—Size effects in the magnetic susceptibility of metals —S. S. Nedorezov. **37**(2), 317–21 (Aug. 1973); CPM-7404E0571

Nepomnyashchiĭ, A. A.—On the theory of elementary–excitation spectrum in liquid He^4 —Yu. A. Nepomnyashchiĭ and A. A. Nepomnyashchiĭ. **38**(1), 134–9 (Jan. 1974); CPM-7405F0134

Nepomnyashchiĭ, Yu. A.—On the theory of elementary–excitation spectrum in liquid He^4 —Yu. A. Nepomnyashchiĭ and A. A. Nepomnyashchiĭ. **38**(1), 134–9 (Jan. 1974); CPM-7405F0134

Nezlin, M. V.—Quasistationary supercooled (recombining) plasma produced by an electron beam in a dense gas —S. V. Antipov, M. V. Nezlin, E. N. Snezhkin, and A. S. Trubnikov. **38**(5), 931–7 (May 1974)

Nikishov, A. I.—Pair production by a periodic electric field —N. B. Narozhnyĭ and A. I. Nikishov. **38**(3), 427–32 (Mar. 1974); CPM-7411X0807

Nikitenko, V. I.—Influence of electrically active impurities on the mobility of separate dislocations in germanium —I. E. Bondarenko, V. N. Erofeev, and V. I. Nikitenko. **37**(6), 1109–15 (Dec. 1973); CPM-7412X0157

—Polarization–optical investigation of magnetization processes near dislocations in yttrium iron garnet single crystals —V. K. Vlasko–Vlasov, L. M. Dedukh, and V. I. Nikitenko. **38**(1), 184–94 (Jan. 1974); CPM-7405F0184

Nikitin, S. A.—Magnetic properties of compounds of rare–earth metals with iron, of the type RF_3 —K. P. Belov, S. A. Nikitin, A. M. Bisliev, E. M. Savitskiĭ, V. F. Terekhova, and V. E. Kolesnichenko. **37**(6), 1086–8 (Dec. 1973); CPM-7412X0134

—NMR investigation of $Gd_xY_{1-x}Fe_2$ compounds —V. A. Vasil'kovskiĭ, N. M. Kovtun, A. K. Kuprianov, S. A. Nikitin, and V. F. Ostrovskiĭ. **38**(2), 342–4 (Feb. 1974); CPM-7405F0560

—Magnetocaloric effect in compounds of rare–earth metals with iron —S. A. Nikitin, E. V. Talalaeva, L. A. Chernikova, and A. S. Andreenko. **38**(5), 1028–30 (May 1974)

Nikitin, V. V.—Orienting effect of an electric field on nematic liquid crystals —P. D. Berezin, I. N. Kompanets, V. V. Nikitin, and S. A. Pikin. **37**(2), 305–8 (Aug. 1973); CPM-7404E0559

Nikitina, N. S.—Induced two–photon synchrotron radiation and Compton scattering in a magnetic field —V. Ch. Zhukovskiĭ and N. S. Nikitina. **37**(4), 595–8 (Oct. 1973); CPM-7407X1337

Nikolaev, B. I.—Kinetic phenomena in a Knudsen gas with rotational degrees of freedom —V. D. Borman, L. A. Maksimov, B. I. Nikolaev, and V. I. Troyan. **37**(2), 269–73 (Aug. 1973); CPM-7404E0523

Nikolaev, V. I.—Magnetocaloric effect in a superparamagnet —V. M. Belova, V. I. Nikolaev, and V. M. Stuchebnikov. **37**(5), 881–2 (Nov. 1973); CPM-7410X0221

Nikolaev, V. V.—Nuclear spin motion with allowance for Suhl–Nakamura interaction —E. A. Turov, M. I. Kurkin, and V. V. Nikolaev. **37**(1), 147–53 (Jul. 1973); CPM-7401D0849

Nikolaev, Yu. A.—Universality of the power spectra of relativistic electrons produced in a turbulent plasma —Yu. A. Nikolaev, V. N. Tsytovich, and A. S. Chikhachev. **37**(3), 445–8 (Sep. 1973); CPM-7406X1453

Nikol'skiĭ, G. S.—Study of the Debye–Waller factor near the temperature of a phase transition of the first kind in cobalt —B. S. Bokshteĭn, Yu. B. Voĭtkovskiĭ, G. S. Nikol'skiĭ, and I. M. Razumovskiĭ. **37**(2), 283–4 (Aug. 1973); CPM-7404E0537

Nikulin, M. G.—Nonlinear interaction of high–amplitude Langmuir waves in a collisionless plasma —A. A. Ivanov and M. G. Nikulin. **38**(1), 83–5 (Jan. 1974); CPM-7405F0083

Nikulin, N. G.—Excitation of ultrashort light pulses in a ruby ring laser with resonance loss modulation —G. V. Krivoshchekov, L. A. Kulevskiĭ, N. G. Nikulin, V. M. Semibalamut, V. A. Smirnov, and V. V. Smirnov. **37**(6), 1007–11 (Dec. 1973); CPM-7412X0055

Nikulin, V. K.—Unified formula for the inelastic differential scattering cross sections of atoms and determination of the excited–term parameters —F. A. Elisenkov and V. K. Nikulin. **37**(1), 65–7 (Jul. 1973); CPM-7401D0767

Nizhankovskiĭ, V. I.—Effect of magnetic breakdown on the Hall effect in beryllium —N. E. Alekseevskiĭ and V. I. Nizhankovskiĭ. **38**(3), 533–7 (Mar. 1974); CPM-7411X0913

Norman, G. É.—Effect of resonances in elastic scattering on the bremsstrahlung of electrons in an atomic field —L. G. D'yachkov, G. A. Kobzev, and G. É. Norman. **38**(4), 697–700 (Apr. 1974); CPM-7502X0057

Nosov, V. G.—Cascade emission of γ-quanta by highly excited nuclei —V. G. Nosov and A. M. Kamchatnov. **38**(1), 6–11 (Jan. 1974); CPM-7405F0006

Novikov, I. D.—The isotropization of homogeneous cosmological models —A. G. Doroshkevich, V. N. Lukash, and I. D. Novikov. **37**(5), 739–46 (Nov. 1973); CPM-7410X0079

—Electromagnetic detectors of gravitational waves —V. B. Braginskiĭ, L. P. Grishchuk, A. G. Doroshkevich, Ya. B. Zel'dovich, I. D. Novikov, and M. V. Sazhin. **38**(5), 865–9 (May 1974)

Novikov, S. P.—Singularities of the cosmological model of the Bianchi IX type according to the qualitative theory of differential equations —O. I. Bogoyavlenskiĭ and S. P. Novikov. **37**(5), 747–55 (Nov. 1973); CPM-7410X0087

O

Obolenskiĭ, M. A.—Dispersion of sound velocity and the electron relaxation time in bismuth and antimony —A. P. Korolyuk, M. A. Obolenskiĭ, and V. I. Beletskiĭ. **38**(5), 979–82 (May 1974)

Obukhov, Yu. V.—Dependence of the asymmetry of negative muon decay electrons on the length of the hydrocarbon chain of alcohols and alkyl chlorides —A. A. Dzhuraev, V. S. Esveev, Yu. V. Obukhov, V. S. Roganov, M. V. Frontas'eva, and N. I. Kholodov. **37**(6), 974–6 (Dec. 1973); CPM-7412X0022

Oganesyan, R. A.—Radiation by electrons due to roughness of a metallic surface —F. R. Arutyunyan, A. Kh. Mkhitaryan, R. A. Oganesyan, and B. O. Rostomyan. **38**(5), 886–90 (May 1974)

Ogurtsov, G. N.—Energy distribution of electrons emitted by argon atoms under electron impact —G. N. Ogurtsov. **37**(4), 584–6 (Oct. 1973); CPM-7407X1326

Oks, E. A.—Polarization spectroscopic analysis of noise produced in annihilation of oppositely moving magnetic fields —M. V. Babykin, A. I. Zhuzhunashvili, E. A. Oks, V. V. Shapkin, and G. V. Sholin. **38**(1), 86–92 (Jan. 1974); CPM-7405F0086

Oleĭnik, V. P.—Scattering of an electron in an electromagnetic wave and in a homogeneous magnetic field —D. I. Abakarov and V. P. Oleĭnik. **37**(5), 784–6 (Nov. 1973); CPM-7410X0124

O'Neil, T.—Interaction between an intense electromagnetic wave and a plasma —A. A. Galeev, G. Laval, T. O'Neil, M. N. Rosenbluth, and R. Z. Sagdeev. **38**(3), 482–9 (Mar. 1974); CPM-7411X0862

Oraevskiĭ, A. N.—Stimulation of chemical reactions by laser radiation —N. G. Basov, E. M. Belenov, E. P. Markin, A. N. Oraevskiĭ, and A. V. Pankratov. **37**(2), 247–52 (Aug. 1973); CPM-7404E0501

—Dips in emission lines of preliminarily polarized molecular (atomic) beams —A. S. Bashkin, A. N. Oraevskiĭ, and A. E. Sakharov. **38**(3), 454–8 (Mar. 1974); CPM-7411X0834

—Nonequilibrium vibrational kinetics of molecules in the presence of the field of resonant laser emission —N. G. Basov, A. N. Oraevskiĭ, A. A. Stepanov, and V. A. Shcheglov. **38**(5), 918–26 (May 1974)

Orlov, Yu. F.—Stable motion and acceleration of a charged particle in a linearly polarized electromagnetic wave in a gaseous medium —G. A. Nagorskiĭ and Yu. F. Orlov. **37**(3), 387–9 (Sep. 1973); CPM-7406X1395

Osiko, V. V.—Effect of donor–donor and donor–acceptor interactions on the decay kinetics of the metastable state of Nd^{3+} in crystals —Yu. K. Voron'ko, T. G. Mamedov, V. V. Osiko, M. I. Timoshechkin, and I. A. Shcherbakov. **38**(3), 565–72 (Mar. 1974); CPM-7411X0945

Osipov, A. I.—Discontinuity of vibrational and translational temperatures in a system with fast-particle sources —A. I. Osipov, A. N. Khmelevskiĭ, and R. V. Khokhlov. **38**(2), 264–6 (Feb. 1974); CPM-7405F0482

—Kinetics of nonequilibrium dissociation of molecules in cascade excitation of oscillations by laser radiation —B. F. Gordiets, A. I. Osipov, and V. Ya. Panchenko. **38**(3), 443–8 (Mar. 1974); CPM-7411X0823

Osip'yan, Yu. A.—Effect of dislocations on the electric properties of p-germanium —Yu. A. Osip'yan and S. A. Shevchenko. **38**(2), 345–8 (Feb. 1974); CPM-7405F0563

Osovets, S. M.—Development of instabilities in a Z-pinch —S. M. Osovets, E. I. Pavlov, and V. I. Sinitsyn. **37**(4), 625–8 (Oct. 1973); CPM-7407X1367

—The dynamics of plasma-column constrictions and the electromagnetic acceleration of ions —V. S. Imshennik, S. M. Osovets, and I. V. Otroshchenko. **37**(6), 1037–44 (Dec. 1973); CPM-7412X0085

Ostrovskiĭ, L. A.—High intensity circularly polarized waves in nonlinear dispersive media —K. A. Gorshkov, V. A. Kozlov, and L. A. Ostrovskiĭ. **38**(1), 93–5 (Jan. 1974); CPM-7405F0093

Ostrovskiĭ, V. F.—NMR investigation of $Gd_xY_{1-x}Fe_2$ compounds —V. A. Vasil'kovskiĭ, N. M. Kovtun, A. K. Kuprianov, S. A. Nikitin, and V. F. Ostrovskiĭ. **38**(2), 342–4 (Feb. 1974); CPM-7405F0560

Otroshchenko, I. V.—The dynamics of plasma–column constrictions and the electromagnetic acceleration of ions —V. S. Imshennik, S. M. Osovets, and I. V. Otroshchenko. **37**(6), 1037–44 (Dec. 1973); CPM-7412X0085

Ovanesyan, N. S.—Magnetic structure and localization of Co^{2+} and Fe^{2+} ions in hexagonal ferrites —V. F. Belov, T. A. Khimich, M. N. Shipko, I. S. Zheludev, E. V. Korneev, and N. S. Ovanesyan. **37**(6), 1089–95 (Dec. 1973); CPM-7412X0137

Ovchinnikov, A. A.—On the possibility of a metal–dielectric transition in one-dimensional systems with noninteger number of electrons per unit —A. A. Ovchinnikov. **37**(1), 176–7 (Jul. 1973); CPM-7401D0878

Ovchinnikov, Yu. N.—Fluctuation shift of the transition temperature of thin superconducting films —Yu. N. Ovchinnikov. **37**(2), 366–8 (Aug. 1973); CPM-7404E0620

—Resistance of superconductors near the critical field strength H_{c2} —A. I. Larkin and Yu. N. Ovchinnikov. **37**(3), 557–60 (Sep. 1973); CPM-7406X1565

—Conductivity of type–II superconductors near the transition temperature —Yu. N. Ovchinnikov. **38**(1), 143–5 (Jan. 1974); CPM-7405F0143

—Electrodynamics of inhomogeneous type–II superconductors —A. I. Larkin and Yu. N. Ovchinnikov. **38**(4), 854–8 (Apr. 1974); CPM-7502X0214

Ovchinnikova, M. Ya.—The shape of the total inelastic cross section curves for atomic collisions —M. Ya. Ovchinnikova. **37**(1), 68–72 (Jul. 1973); CPM-7401D0770

Ozhogin, V. I.—Antiferromagnetic resonance investigation of the magnetoelastic interaction in hematite —P. P. Maksimenkov and V. I. Ozhogin. **38**(2), 324–8 (Feb. 1974); CPM-7405F0542

P

Pal', A. F.—Non–self-sustained stationary gas discharge induced by electron–beam ionization in N_2–CO_2 mixtures at atmospheric pressure —E. P. Velikhov, S. A. Golubev, Yu. K. Zemtsov, A. F. Pal', I. G. Persiantsev, V. D. Pis'mennyĭ, and A. T. Rakhimov. **38**(2), 267–9 (Feb. 1974); CPM-7405F0485

Panchenko, O. A.—Reflection of conduction electrons from an atomically pure (110) face a of a tungsten crystal —P. P. Lutsishin, O. A. Panchenko, and A. A. Kharlamov. **37**(6), 1083–5 (Dec. 1973); CPM-7412X0131

Panchenko, V. Ya.—Kinetics of nonequilibrium dissociation of molecules in cascade excitation of oscillations by laser radiation —B. F. Gordiets, A. I. Osipov, and V. Ya. Panchenko. **38**(3), 443–8 (Mar. 1974); CPM-7411X0823

Pankov, A. A.—Magnetic birefringence of light in antiferromagnetic transition–metal fluorides —A. S. Borovik-Romanov, N. M. Kreĭnes, A. A. Pankov, and M. A. Talalaev. **37**(5), 890–6 (Nov. 1973); CPM-7410X0230

Pankratov, A. V.—Stimulation of chemical reactions by laser radiation —N. G. Basov, E. M. Belenov, E. P. Markin, A. N. Oraevskiĭ, and A. V. Pankratov. **37**(2), 247–52 (Aug. 1973); CPM-7404E0501

Panov, M. N.—Interaction of protons and hydrogen atoms with CO molecules —V. V. Afrosimov, G. A. Leĭko, Yu. A. Mamaev, M. N. Panov, and M. Vuĭovich. **38**(2), 243–7 (Feb. 1974); CPM-7405F0461

Panova, G. Kh.—Alteration of the superconducting properties of vanadium by introduction of tantalum impurity atoms —N. A. Chernoplekov, G. Kh. Panova, B. N. Samoĭlov, and A. A. Shikov. **37**(1), 102–6 (Jul. 1973); CPM-7401D0804

Papanyan, V. O.—The three–photon interaction in intense fields and scale invariance —V. O. Papanyan and V. I. Ritus. **38**(5), 879–85 (May 1974)

Paperný, V. L.—Interaction between a high frequency magnetic field and potential plasma oscillations in a Q–device —L. L. Artsimovich, A. A. Ivanov, A. N. Luk'yanchuk, V. L. Papernyĭ, V. D. Rusanov, and S. S. Sobolev. **37**(2), 236–9 (Aug. 1973); CPM-7404E0490

Papin, V. G.—Vibrational relaxation of HF and DF in a shock wave —G. K. Vasil'ev, E. F. Makarov, V. G. Papin, and V. L. Tal'rose. **37**(6), 1031–3 (Dec. 1973); CPM-7412X0079

Parail, V. V.—Thermal ionization wave in a current–carrying system —A. A. Ivanov, V. V. Parail, and T. K. Soboleva. **37**(4), 633–6 (Oct. 1973); CPM-7407X1375

Parfenova, V. P.—Magnetic hyperfine interaction for Co^{60} in PdRhCo alloys —A. L. Erzinkyan, V. P. Parfenova, and Yu. N. Sokhanenkov. **37**(3), 487–90 (Sep. 1973); CPM-7406X1495

Pariĭskaya, L. V.—One–dimensionalmotion of a low density plasma in a magnetic field —A. V. Gurevich, L. V. Pariĭskaya, and L. P. Pitaevskiĭ. **37**(6), 1071–7 (Dec. 1973); CPM-7412X0119

Pashitskiĭ, É. A.—Effect of the low–frequency peaks of the phonon state density on the critical temperature of superconductors —M. V. Medvedev, É. A. Pashitskiĭ, and Yu. S. Pyatiletov. **38**(3), 587–92 (Mar. 1974); CPM-7411X0967

Patashinskiĭ, A. Z.—Longitudinal susceptibility and correlations in degenerate systems —A. Z. Patashinskiĭ and V. L. Pokrovskiĭ. **37** (4), 733–6 (Oct. 1973); CPM-7407X1475

Pavlik, B. D.—Nonlinear narrow density resonances of excited molecules in a standing light wave —V. S. Letokhov and B. D. Pavlik. **37**(3), 408–12 (Sep. 1973); CPM-7406X1416

Pavlov, E. I.—Development of instabilities in a Z–pinch —S. M. Osovets, E. I. Pavlov, and V. I. Sinitsyn. **37**(4), 625–8 (Oct. 1973); CPM-7407X1367

Pavlov, G. G.—The transfer equations for normal waves and radiation polarization in an anisotropic medium —Yu. N. Gnedin and G. G. Pavlov. **38**(5), 903–8 (May 1974)

Pavlov, N. B.—Destruction of superconductivity in thin narrow films by a current —V. P. Andratskiĭ, L. M. Grundel', V. N. Gubankov, and N. B. Pavlov. **38**(4), 794–8 (Apr. 1974); CPM-7502X0154

Pavlovich, P.—"Needle" Vavilov–Cerenkov radiation in a Rochelle salt crystal —V. P. Zrelov, P. Pavlovich, and P. Sulek. **37**(1), 127–31 (Jul. 1973); CPM-7401D0829

Pekar, S. I.—Theory of spontaneous and stimulated electroluminescence of ZnS: Mn films —N. A. Vlasenko, S. I. Pekar, and V. S. Pekar. **37**(1), 190–4 (Jul. 1973); CPM-7401D0892

—Theory of polarons in multivalley crystals. III. Arbitrary coupling force between the electron and the lattice polarization vibrations —S. I. Pekar, L. S. Khazan, and V. I. Sheka. **38**(5), 999–1002 (May 1974)

Pekar, V. S.—Theory of spontaneous and stimulated electroluminescence of ZnS: Mn films —N. A. Vlasenko, S. I. Pekar, and V. S. Pekar. **37**(1), 190–4 (Jul. 1973); CPM-7401D0892

Perel', V. I.—Optical orientation in a system of electrons and lattice nuclei in semiconductors. Theory —M. I. D'yakonov and V. I. Perel'. **38**(1), 177–83 (Jan. 1974); CPM-7405F0177

—Alignment of excited atoms in a gas discharge —V. I. Perel' and I. V. Rogova. **38**(3), 501–4 (Mar. 1974); CPM-7411X0881

Persiantsev, I. G.—Non–self–sustained stationary gas discharge induced by electron–beam ionization in N_2–CO_2 mixtures at attmospheric pressure —E. P. Velikhov, S. A. Golubev, Yu. K. Zemtsov, A. F. Pal', I. G. Persiantsev, V. D. Pis'mennyĭ, and A. T. Rakhimov. **38**(2), 267–9 (Feb. 1974); CPM-7405F0485

Personov, R. I.—Fine structure of luminescence spectra of laser–excited organic molecules and the nature of the broad spectral bands of solid solutions —R. I. Personov, E. I. Al'shitz, L. A. Bykovskaya, and B. M. Kharlamov. **38**(5), 912–7 (May 1974)

Perstnev, I. P.—Interference of nuclear and electron scatterings of 14.4 keV resonance γ–ray in Bragg reflection from an α–Fe_2O_3 crystal —A. N. Artem'ev, I. P. Perstnev, V. V. Sklyarevskiĭ, G. V. Smirnov, and E. P. Stepanov. **37**(1), 136–41 (Jul. 1973); CPM-7401D0838

—High–temperature resistivity and the superconductivity of potassium and rubidium at high pressures —G. M. Gandelman, O. Yu. Itskovich, P. S. Kondratenko, I. P. Perstnev, and V. M. Finkelberg. **38**(1), 111–5 (Jan. 1974); CPM-7405F0111

—Suppression of inelastic channels under hyperfine splitting conditions. Interference phenomena —A. M. Afanas'ev and I. P. Perstnev. **38**(3), 630–3 (Mar. 1974); CPM-7411X1010

Pestov, É. G.—Field narrowing of spectral lines —É. G. Pestov and S. G. Rautian. **37**(6), 1025–30 (Dec. 1973); CPM-7412X0073

Petrashov, V. T.—Temperature dependence of the damping of helicons in indium —E. P. Vol'skiĭ and V. T. Petrashov. **37**(1), 132–5 (Jul. 1973); CPM-7401D0834

—The de Haas–van Alphen effect and damping of helicons during plastic deformation in aluminum —E. P. Vol'skiĭ, L. G. Levchenkova, and V. T. Petrashov. **38**(1), 156–7 (Jan. 1974); CPM-7405F0156

Petrenko, N. S.—Thermal expansion of thulium in the 2–300 °K temperature range —N. S. Petrenko and V. P. Popov. **38**(1), 123–4 (Jan. 1974); CPM-7405F0123

Petrov, R. A.—Anomalous magnetooptical properties of bismuth–containing iron garnets —G. S. Krinchik, V. A. Krylova, E. V. Berdennikova, and R. A. Petrov. **38**(2), 354–6 (Feb. 1974); CPM-7405F0572

Petrov, Yu. N.—Dissociation and belaching of a multilevel molecular gas by high power CO_2 laser radiation —N. V. Karlov, N. A. Karpov, Yu. N. Petrov, and O. M. Stel'makh. **37**(6), 1012–6 (Dec. 1973); CPM-7412X0060

Petrovich, E. V.—Investigation of the electronic mechanism of the isomorphic phase transition in cerium —V. A. Shaburov, I. M. Band, A. I. Grushko, T. B. Mezentseva, E. V. Petrovich, Yu. P. Smirnov, A. E. Sovestnov, O. I. Sumbaev, M. B. Trzhaskovskaya, and I. A. Markova. **38**(3), 573–81 (Mar. 1974); CPM-7411X0953

Petrukhin, V. I.—Observation of the negative induction effect by bound hydrogen capture of π^- mesons —L. Vil'gel'mova, P. Zimrot, V. I. Petrukhin, V. E. Risin, L. M. Smirnova, V. M. Suvorov, and I. A. Yutlandov. **38**(1), 12–3 (Jan. 1974); CPM-7405F0012

—Search for structural effects in π^- meson capture by hydrogen in complex molecules —Z. V. Krumshtein, V. I. Petrukhin, V. E. Risin, L. M. Smirnova, V. M. Suvorov, and I. A. Yutlandov. **38**(2), 222–3 (Feb. 1974); CPM-7405F0440

Petukhov, B. V.—Rate of penetration of a magnetic flux into type–II superconductors —B. V. Petukhov and V. R. Chechetkin. **38**(4), 827–9 (Apr. 1974); CPM-7502X0187

Pikin, S. A.—Orienting effect of an electric field on nematic liquid crystals —P. D. Berezin, I. N. Kompanets, V. V. Nikitin, and S. A. Pikin. **37**(2), 305–8 (Aug. 1973); CPM-7404E0559

—Couette flow of a nematic liquid —S. A. Pikin. **38**(6), 1246–50 (Jun. 1974)

Pikus, G. E.—Optical orientation of excitons in uniaxial crystals. Large exchange splitting —G. L. Bir and G. E. Pikus. **37**(6), 1116–21 (Dec. 1973); CPM-7412X0164

Piliya, A. D.—Nonstationary theory of decay instability in a weakly inhomogeneous plasma —A. D. Piliya. **37**(4), 629–32 (Oct. 1973); CPM-7407X1371

Pinus, V. K.—Gravitational collapse with a physical singularity on an isotropic hypersurface —V. K. Pinus and A. L. Frenkel'. **37**(1), 25–7 (Jul. 1973); CPM-7401D0727

—Anisotropic solution of the gravitation equations with an isotropic singular hypersurface —V. K. Pinus. **37**(4), 564–7 (Oct. 1973); CPM-7407X1306

Pisarev, R. V.—Magnetrooptical investigation of the magnetization compensation point in gadolinium iron garnets —O. A. Grzhegorzhevskii and R. V. Pisarev. **38**(2), 312–6 (Feb. 1974); CPM-7405F0530

Piskova, G. K.—Cross sections for multiphoton ionization of alkali metal atoms —G. A. Delone, N. B. Delone, V. K. Zolotarev, N. L. Manakov, G. K. Piskova, and M. A. Tursunov. **38**(2), 236–8 (Feb. 1974); CPM-7405F0454

Pis'mennyĭ, V. D.—Electron temperature in a weakly ionized plasma when the skin effect is nonlinear.—V. D. Pis'mennyĭ, T. V. Rakhimova, and A. T. Rakhimov. **37**(2), 253–6 (Aug. 1973); CPM-7404E0507

—Non–self–sustained stationary gas discharge induced by electron–beam ionization in N_2–CO_2 mixtures at attmospheric pressure —E. P. Velikhov, S. A. Golubev, Yu. K. Zemtsov, A. F. Pal', I. G. Persiantsev, V. D. Pis'mennyĭ, and A. T. Rakhimov. **38** (2), 267–9 (Feb. 1974); CPM-7405F0485

Pitaevskiĭ, L. P.—One–dimensionalmotion of a low density plasma in a magnetic field —A. V. Gurevich, L. V. Pariĭskaya, and L. P. Pitaevskiĭ. **37**(6), 1071–7 (Dec. 1973); CPM-7412X0119

—Nonstationary structure of a collisionless shock wave —A. V. Gurevich and L. P. Pitaevskiĭ. **38**(2), 291–7 (Feb. 1974); CPM-7405F0509

—Structure of the bound–state spectrum of two rotons in superfluid helium —L. P. Pitaevskiĭ and I. A. Fomin. **38**(6), 1257–9 (Jun. 1974)

Pivovar, L. I.—Composition of the slow ions produced upon ionization of gases by high energy protons —Yu. Z. Levchenko, L. I. Pivovar, and G. D. Tolstolutskaya. **37**(6), 1004–6 (Dec. 1973); CPM-7412X0052

Platonenko, V. T.—Collision-radiative processes and molecular lasers —M. M. Mkrtchyan, V. T. Platonenko, and R. V. Khokhlov. **38** (1), 71–4 (Jan. 1974); CPM-7405F0071

Platova, A. G.—Excitation of vibrational levels in the $N^{14}H_3$ molecule by radiation from a CO_2 laser —R. V. Ambartsumyan, V. S. Letokhov, G. N. Markarov, A. G. Platova, A. A. Puretskiĭ, and O. A. Tumanov. **37**(3), 392–8 (Sep. 1973); CPM-7406X1400

Plotnikov, V. G.—Dependence of fluorescence characteristics on the spectral distribution of the intensity of the exciting electromagnetic field —V. G. Plotnikov and G. G. Konoplev. **38**(3), 476–81 (Mar. 1974); CPM-7411X0856

Podsosonnyĭ, A. S.—Electric ionization lasers —N. G. Basov, É. M. Belenov, V. A. Danilychev, O. M. Kerimov, I. B. Kovsh, A. S. Podsosonnyĭ, and A. F. Suchkov. **37**(1), 58–64 (Jul. 1973); CPM-7401D0760

Podurets, M. A.—Synthesis of a high-density phase of silicon dioxide in shock waves —V. N. German, M. A. Podurets, and R. F. Trunin. **37**(1), 107 (Jul. 1973); CPM-7401D0809

Pogosyan, V. A.—Waves and forces in a homogeneous medium with time-varying properties —G. A. Askar'yan and V. A. Pogosyan. **38**(1), 58–60 (Jan. 1974); CPM-7405F0058

Pogutse, O. P.—Nonlinear helical perturbations of a plasma in a tokamak —B. B. Kadomtsev and O. P. Pogutse. **38**(2), 283–90 (Feb. 1974); CPM-7405F0501

Pokrovskiĭ, V. L.—Critical phenomena in a liquid in a strong electric field —V. L. Pokrovskiĭ and S. V. Fomichev. **37**(4), 731–2 (Oct. 1973); CPM-7407X1473

—Longitudinal susceptibility and correlations in degenerate systems —A. Z. Patashinskiĭ and V. L. Pokrovskiĭ. **37**(4), 733–6 (Oct. 1973); CPM-7407X1475

—Magnetic properties of plane and layer systems —V. L. Pokrovskiĭ and G. V. Uimin. **38**(4), 847–53 (Apr. 1974); CPM-7502X0207

Polievktov-Nikoladze, N. M.—On the phenomenology of gravitation —N. M. Polievktov-Nikoladze. **37**(6), 959–67 (Dec. 1973); CPM-7412X0007

Polkovnikov, B. V.—Spatial dispersion of two-photon absorption — D. N. Klyshko and B. V. Polkovnikov. **37**(1), 154–5 (Jul. 1973); CPM-7401D0856

Polovov, V. M.—On the thermodynamics of face-centered tetragonal ⇄ face-centered cubic transitions in indium alloys —V. M. Polovov and E. G. Ponyatovskiĭ. **37**(3), 476–80 (Sep. 1973); CPM-7406X1484

—Anomalies of the specific heat of samarium at high temperatures — V. M. Polovov. **38**(4), 775–8 (Apr. 1974); CPM-7502X0135

Pol'skiĭ, Yu. E.—Experimental investigation of the generation kinetics of a ruby laser with a nonstationary resonator —Yu. E. Pol'skiĭ and A. A. Yakutenkov. **37**(2), 223–6 (Aug. 1973); CPM-7404E0477

Ponomarev, L. I.—Calculation of the energy levels of hydrogen mesic molecules by taking into account adiabatic corrections for nuclear motion —L. I. Ponomarev, I. V. Puzynin, and T. P. Puzynina. **38** (1), 14–7 (Jan. 1974); CPM-7405F0014

Ponomarev, V. I.—Scaling relation for phase transitions in a one-dimensional x-y model —V. I. Ponomarev, V. M. Kontorovich, and V. M. Tsukernik. **38**(3), 600–3 (Mar. 1974); CPM-7411X0980

Ponyatovskiĭ, E. G.—On the thermodynamics of face-centered tetragonal ⇄ face-centered cubic transitions in indium alloys —V. M. Polovov and E. G. Ponyatovskiĭ. **37**(3), 476–80 (Sep. 1973); CPM-7406X1484

Popov, V. N.—Quantum vortices and phase transitions in Bose systems —V. N. Popov. **37**(2), 341–5 (Aug. 1973); CPM-7404E0595

—On the superfluidity of the Fermi component in a Fermi-Bose gas and in He^3-He^4 solutions —V. A. Andrianov and V. N. Popov. **37** (5), 940–1 (Nov. 1973); CPM-7410X0280

Popov, V. P.—Thermal expansion of thulium in the 2–300 °K temperature range —N. S. Petrenko and V. P. Popov. **38**(1), 123–4 (Jan. 1974); CPM-7405F0123

Popov, V. S.—Spontaneous positron production in collisions between heavy nuclei —V. S. Popov. **38**(1), 18–26 (Jan. 1974); CPM-7405F0018

—The phase method for the Dirac equation and the calculation of the critical nuclear charge —M. S. Marinov and V. S. Popov. **38**(6), 1069–75 (Jun. 1974)

Popovichev, V. I.—Influence of saturation on the amplification of light in stimulated Brillouin scattering —V. I. Kovalev, V. I. Popovichev, V. N. Ragul'skiĭ, and F. S. Faĭzullov. **37**(6), 1023–4 (Dec. 1973); CPM-7412X0071

Poritskiĭ, V. Ya.—Excitation of ion Langmuir oscillations by a fast ion beam —M. D. Gabovich, A. A. Goncharov, V. Ya. Poritskiĭ, and I. M. Protsenko. **37**(4), 655–7 (Oct. 1973); CPM-7407X1397

Prokhorov, A. M.—Effect of magnetic field on soft x-ray radiation from laser plasma —T. B. Volyak, S. D. Kaĭtmazov, A. M. Prokhorov, and E. I. Shklovskiĭ. **37**(2), 245–6 (Aug. 1973); CPM-7404E0499

—On the multifocus structure of light beams in nonlinear media —A. L. Dyshko, V. N. Lugovoĭ, and A. M. Prokhorov. **38**(4), 680–3 (Apr. 1974); CPM-7502X0040

Protasov, E. A.—Alternating oscillations in the photocurrent spectra of nonequuilibrium photoelectrons in p-type InSb subjected to quantizing magnetic fields —A. S. Aleksandrov, Yu. A. Bykovskiĭ, V. F. Elesin, E. A. Protasov, and A. G. Rodionov. **37** (1), 120–6 (Jul. 1973); CPM-7401D0822

Protsenko, E. D.—Mode locking in gas lasers —S. A. Gonchukov, V. M. Ermanchenko, and E. D. Protsenko. **38**(2), 239–42 (Feb. 1974); CPM-7405F0457

Protsenko, I. M.—Excitation of ion Langmuir oscillations by a fast ion beam —M. D. Gabovich, A. A. Goncharov, V. Ya. Poritskiĭ, and I. M. Protsenko. **37**(4), 655–7 (Oct. 1973); CPM-7407X1397

Prozorova, L. A.—Spin wave relaxation in antiferromagnetic $CsMnF_3$ —B. Ya. Kotyuzhanskiĭ and L. A. Prozorova. **38**(6), 1233–7 (Jun. 1974)

Przhibelskiĭ, S. G.—Investigation of stimulated four-photon parametric scattering of laser radiation in alkali-metal vapor —A. M. Bonch-Bruevich, S. G. Przhibelskiĭ, V. A. Khodovoĭ, and V. V. Khromov. **38**(1), 30–6 (Jan. 1974); CPM-7405F0030

Ptitsina, N. G.—Submillimeter spectroscopy of semiconductors —E. M. Gershenzon, G. N. Gol'tsman, and N. G. Ptitsina. **37**(2), 299–304 (Aug. 1973); CPM-7404E0553

Puretskiĭ, A. A.—Excitation of vibrational levels in the $N^{14}H_3$ molecule by radiation from a CO_2 laser —R. V. Ambartsumyan, V. S. Letokhov, G. N. Markarov, A. G. Platova, A. A. Puretskiĭ, and O. A. Tumanov. **37**(3), 392–8 (Sep. 1973); CPM-7406X1400

Pushkarov, D. I.—Quantum theory of Crowdions at low temperatures —D. I. Pushkarov. **37**(2), 322–5 (Aug. 1973); CPM-7404E0576

Pustovalov, V. V.—Quasilinear theory of a parametrically unstable magnetoactive plasma —V. V. Pustovalov, V. P. Silin, and V. T. Tikhonchuk. **37**(3), 429–35 (Sep. 1973); CPM-7406X1437

—Nonlinear dissipation of electromagnetic waves in a plasma —V. V. Pustovalov and V. P. Silin. **38**(1), 96–101 (Jan. 1974); CPM-7405F0096

—Nonlinear conversion of radiation into plasma waves —V. V. Pustovalov, V. P. Silin, and V. T. Tikhonchuk. **38**(5), 938–43 (May 1974)

Pustovoĭt, V. I.—Phonon transition radiation —V. M. Levin, V. I. Pustovoĭt, and L. A. Chernozatonskiĭ. **37**(5), 909–13 (Nov. 1973); CPM-7410X0249

Puzynin, I. V.—Calculation of the energy levels of hydrogen mesic molecules by taking into account adiabatic corrections for nuclear motion —L. I. Ponomarev, I. V. Puzynin, and T. P. Puzynina. **38** (1), 14–7 (Jan. 1974); CPM-7405F0014

Puzynina, T. P.—Calculation of the energy levels of hydrogen mesic molecules by taking into account adiabatic corrections for nuclear motion —L. I. Ponomarev, I. V. Puzynin, and T. P. Puzynina. **38** (1), 14–7 (Jan. 1974); CPM-7405F0014

Pyatak, A. I.—Electron-acoustic and drift instabilities in a finite-pressure plasma with a perpendicular current —J. P. Goedbloed, A. I. Pyatak, and V. L. Sizonenko. **37**(6), 1051–6 (Dec. 1973); CPM-7412X0099

Pyatletov, Yu. S.—Effect of the low-frequency peaks of the phonon state density on the critical temperature of superconductors —M. V. Medvedev, É. A. Pashitskiĭ, and Yu. S. Pyatletov. **38**(3), 587–92 (Mar. 1974); CPM-7411X0967

R

Rabinkin, A. G.—Effect of high uniform pressure and residual stress on the superconductivity of alloys of the $V_3(Si_{1-x}Ge_x)$ system —A. G. Rabinkin, V. N. Galev, and V. N. Laukhin. 37(5), 870–4 (Nov. 1973); CPM-7410X0210

—Phase transition induced in KCl by pressure at low temperatures — V. N. Laukhin, A. G. Rabin'kin, and É. I. Éstrin. 37(6), 1150–2 (Dec. 1973); CPM-7412X0198

—Effect of high hydrostatic pressure and residual strain on the superconductivity of Nb–Al–Ge alloys with an A15–type structure —V. N. Galev and A. G. Rabin'kin. 38(3), 525–32 (Mar. 1974); CPM-7411X0905

Rabinovich, M. I.—Stimulated temperature scattering of electromagnetic waves in a plasma with collisions —N. A. Mityakov, M. I. Rabinovich, V. O. Rapoport, and L. E. Shtil'man. 38(5), 944–6 (May 1974)

Rabinovich, R. I.—Singularities of energy states of localized electrons in strongly compensated n–InSb —V. V. Arendarchuk, E. M. Gershenzon, L. B. Litvak–Gorskaya, and R. I. Rabinovich. 38(6), 1192–7 (Jun. 1974)

Ragul'skiĭ, V. N.—Influence of saturation on the amplification of light in stimulated Brillouin scattering —V. I. Kovalev, V. I. Popovichev, V. N. Ragul'skiĭ, and F. S. Faĭzullov. 37(6), 1023–4 (Dec. 1973); CPM-7412X0071

Raĭkher, Yu. L.—On the kinetics of magnetization of suspensions of ferromagnetic particles —M. A. Martsenyuk, Yu. L. Raĭkher, and M. I. Shliomis. 38(2), 413–6 (Feb. 1974); CPM-7405F0631

Raĭtsis, V. I.—Magnetic anisotropy and magnetostriction of neodymium–substituted yttrium iron garnets —N. V. Volkova and V. I. Raĭtsis. 38(2), 339–41 (Feb. 1974); CPM-7405F0557

Rakhimov, A. T.—Electron temperature in a weakly ionized plasma when the skin effect is nonlinear.—V. D. Pis'mennyĭ, T. V. Rakhimova, and A. T. Rakhimov, 37(2), 253–6 (Aug. 1973); CPM-7404E0507

—Non–self–sustained stationary gas discharge induced by electron–beam ionization in N_2–CO_2 mixtures at atmospheric pressure —E. P. Velikhov, S. A. Golubev, Yu. K. Zemtsov, A. F. Pal', I. G. Persiantsev, V. D. Pis'mennyĭ, and A. T. Rakhimov. 38 (2), 267–9 (Feb. 1974); CPM-7405F0485

Rakhimova, T. V.—Electron temperature in a weakly ionized plasma when the skin effect is nonlinear.—V. D. Pis'mennyĭ, T. V. Rakhimova, and A. T. Rakhimov. 37(2), 253–6 (Aug. 1973); CPM-7404E0507

Rakhmatulina, A. Kh.—The dynamics of the expansion of a vapor when evaporated into a vacuum —S. I. Anisimov and A. Kh. Rakhmatulina. 37(3), 441–4 (Sep. 1973); CPM-7406X1449

Rantsev–Kartinov, V. A.—Development of instability and the neutron emission by a Z–pinch —V. V. Aleksandrov, N. G. Koval'skiĭ, S. Yu. Lukyanov, V. A. Rantsev–Kartinov, and M. M. Stepanenko. 37(4), 622–4 (Oct. 1973); CPM-7407X1364

Rapoport, V. O.—Stimulated temperature scattering of electromagnetic waves in a plasma with collisions —N. A. Mityakov, M. I. Rabinovich, V. O. Rapoport, and L. E. Shtil'man. 38(5), 944–6 (May 1974)

Rautian, S. G.—Field narrowing of spectral lines —É. G. Pestov and S. G. Rautian. 37(6), 1025–30 (Dec. 1973); CPM-7412X0073

Razumovskiĭ, I. M.—Study of the Debye–Waller factor near the temperature of a phase transition of the first kind in cobalt —B. S. Bokshtein, Yu. B. Voĭtkovskiĭ, G. S. Nikol'skiĭ, and I. M. Razumovskiĭ. 37(2), 283–4 (Aug. 1973); CPM-7404E0537

Risin, V. E.—Observation of the negative induction effect by bound hydrogen capture of π^- mesons —L. Vil'gel'mova, P. Zimrot, V. I. Petrukhin, V. E. Risin, L. M. Smirnova, V. M. Suvorov, and I. A. Yutlandov. 38(1), 12–3 (Jan. 1974); CPM-7405F0012

—Search for structural effects in π^- meson capture by hydrogen in complex molecules —Z. V. Krumshtein, V. I. Petrukhin, V. E. Risin, L. M. Smirnova, V. M. Suvorov, and I. A. Yutlandov. 38(2), 222–3 (Feb. 1974); CPM-7405F0440

Ritus, V. I.—The three–photon interaction in intense fields and scale invariance —V. O. Papanyan and V. I. Ritus. 38(5), 879–85 (May 1974)

Rizaev, V. R.—Quadrupole phonon echo of a system of three–level particles in a cubic crystal field —U. Kh. Kopvillem and V. R. Rizaev. 38(6), 1147–52 (Jun. 1974)

Rode, V. E.—Susceptibility of copper–nickel alloys —V. E. Rode, A. Bluschke, B. N. Krainov, and A. I. Leichenko. 37(2), 280–2 (Aug. 1973); CPM-7404E0534

Rodionov, A. G.—Alternating oscillations in the photocurrent spectra of nonequuilibrium photoelectrons in p–type InSb subjected to quantizing magnetic fields —A. S. Aleksandrov, Yu. A. Bykovskiĭ, V. F. Elesin, E. A. Protasov, and A. G. Rodionov. 37 (1), 120–6 (Jul. 1973); CPM-7401D0822

Rodionov, Yu. F.—New data on the alpha decay of Cf^{249} —S. A. Baranov, V. M. Shatinskiĭ, V. M. Kulakov, and Yu. F. Rodionov. 37(6), 993 (Dec. 1973); CPM-7412X0041

Roganov, V. S.—Dependence of the asymmetry of negative muon decay electrons on the length of the hydrocarbon chain of alcohols and alkyl chlorides —A. A. Dzhuraev, V. S. Esveev, Yu. V. Obukhov, V. S. Roganov, M. V. Frontas'eva, and N. I. Kholodov. 37(6), 974–6 (Dec. 1973); CPM-7412X0022

Rogova, I. V.—Alignment of excited atoms in a gas discharge —V. I. Perel' and I. V. Rogova. 38(3), 501–4 (Mar. 1974); CPM-7411X0881

Roĭtsin, A. B.—Orbital momentum, Zeeman energy, and spin–orbit interaction in noncentral ions —A. B. Roĭtsin. 37(3), 504–5 (Sep. 1973); CPM-7406X1512

Romanov, V. P.—Analysis of the anisotropic light scattering spectrum in liquids —L. A. Zubkov, N. B. Rozhdestvenskaya, and V. P. Romanov. 38(5), 891–7 (May 1974)

Rosenbluth, M. N.—Interaction between an intense electromagnetic wave and a plasma —A. A. Galeev, G. Laval, T. O'Neil, M. N. Rosenbluth, and R. Z. Sagdeev. 38(3), 482–9 (Mar. 1974); CPM-7411X0862

Rosinskiĭ, S. E.—Magnetic and charge neutralization of an electron beam injected into a magnetoactive plasma —S. E. Rosinskiĭ and V. G. Rukhlin. 37(3), 436–40 (Sep. 1973); CPM-7406X1444

Rostomyan, B. O.—Radiation by electrons due to roughness of a metallic surface —F. R. Arutyunyan, A. Kh. Mkhitaryan, R. A. Oganesyan, and B. O. Rostomyan. 38(5), 886–90 (May 1974)

Rozhavskiĭ, A. S.—Kinetics of conduction electrons in multidomain ferromagnetic structures —R. I. Shekhter and A. S. Rozhavskiĭ. 38 (2), 383–5 (Feb. 1974); CPM-7405F0601

Rozhdestvenskaya, N. B.—Analysis of the anisotropic light scattering spectrum in liquids —L. A. Zubkov, N. B. Rozhdestvenskaya, and V. P. Romanov. 38(5), 891–7 (May 1974)

Rubenchik, A. M.—Nonlinear theory of the parametric instability of waves in a plasma —V. S. L'vov and A. M. Rubenchik. 37(2), 263–8 (Aug. 1973); CPM-7404E0517

—Instability of waveguides and solitons in nonlinear media —V. E. Zakharov and A. M. Rubenchik. 38(3), 494–500 (Mar. 1974); CPM-7411X0874

Rubin, P. L.—Probabilities of population of rotational levels by electron excitation of diatomic molecules —P. L. Rubin. 38(4), 684–7 (Apr. 1974); CPM-7502X0044

Rudat, V.—A possible mechanism for the peak effect in hard superconductors —G. Kluge and V. Rudat. 38(4), 738–40 (Apr. 1974); CPM-7502X0098

Rudavskiĭ, É. Ya.—Absorption of first sound in liquid He^3 —N. B. Dyumin, B. N. Esel'son, and É. Ya. Rudavskiĭ. 38(1), 116–8 (Jan. 1974); CPM-7405F0116

Rudnev, A. V.—Effect of pressure on the Fermi surface of zinc —V. A. Venttsel', C. A. Voronov, A. I. Likhter, and A. V. Rudnev. 38 (6), 1220–4 (Jun. 1974)

Rukhadze, A. A.—Investigation of equilibrium and stability of self–contracted discharges in an optically dense plasma —A. F. Aleksandrov, V. V. Zosimov, A. A. Rukhadze, V. I. Savoskin, and I. B. Timofeev. 37(5), 794–800 (Nov. 1973); CPM-7410X0134

—Nonlinear oscillations of an unstable plasma —E. Abu–Asali, B. A. Al'terkop, and A. A. Rukhadze. 37(5), 820–2 (Nov. 1973); CPM-7410X0160

—Nonlinear ion surface oscillations in a semi–restricted current–carrying plasma —E. A. Abu–Asali, B. A. Al'terkop, R. D. Dzhamalov, and A. A. Rukhadze. 37(6), 1034–6 (Dec. 1973); CPM-7412X0082

Rukhlin, V. G.—Magnetic and charge neutraiization of an electron beam injected into a magnetoactive plasma —S. E. Rosinskiĭ and V. G. Rukhlin. 37(3), 436–40 (Sep. 1973); CPM-7406X1444

Rumer, Yu. B.—Field theory of gravitational field sources —Yu. B. Rumer and B. G. Konopel'chenko. 37(4), 568–71 (Oct. 1973); CPM-7407X1310

Rumyantsev, A. A.—Perturbation theory with allowance for exchange forces —A. A. Rumyantsev. 38(3), 459–62 (Mar. 1974); CPM-7411X0839

Rupasov, A. A.—Investigation of the reflection of laser radiation from a dense plasma —A. A. Rupasov, G. V. Sklizkov, V. P. Tsapenko, and A. S. Shikanov. 38(5), 947–50 (May 1974)

Rusanov, V. D.—Interaction between a high frequency magnetic field and potential plasma oscillations in a Q-device —L. L. Artsimovich, A. A. Ivanov, A. N. Luk'yanchuk, V. L. Papernyĭ, V. D. Rusanov, and S. S. Sobolev. 37(2), 236–9 (Aug. 1973); CPM-7404E0490

Rusinov, A. I.—Theory of superconductivity in the presence of electron–hole pairing in semimetals at T=0 —A. I. Rusinov, Chan Kat Do, and Yu. V. Kopaev. 38(5), 991–8 (May 1974)

Rutkevich, B. N.—Control of instability development in multibeam systems —V. D. Fedorchenko, Yu. P. Mazalov, A. S. Bakaĭ, and B. N. Rutkevich. 38(6), 1111–6 (Jun. 1974)

Ryabchenko, S. M.—Antiferromagnetic resonance in layered $CoCl_2$ and $NiCl_2$ crystals —A. F. Lozenko and S. M. Ryabchenko. 38(3), 538–41 (Mar. 1974); CPM-7411X0918

Ryazanov, M. I.—Coherent light emission by atoms excited by fast particles in an electromagnetic field —M. I. Ryazanov. 38(1), 61–4 (Jan. 1974); CPM-7405F0061

Rybakov, B. V.—A method for measuring collision broadening of spectral lines —B. V. Rybakov, S. S. Skulachenko, A. M. Khromykh, and I. I. Yudin. 37(4), 582–3 (Oct. 1973); CPM-7407X1324

Ryskin, A. I.—Influence of the dynamic Jahn–Teller effect on the structure of quartet terms of the tetrahedrally coordinated ion Co^{2+}(ZnS—Co) —A. I. Ryskin, A. L. Natadze, and S. A. Kazanskiĭ. 37(3), 462–6 (Sep. 1973); CPM-7406X1470

Ryskin, G. Ya.—Isotopic equilibrium in a hydrogen plus alkali–metal hydroxide system —Yu. M. Baĭkov and G. Ya. Ryskin. 38(3), 628–9 (Mar. 1974); CPM-7411X1008

Rytov, S. M.—"Kirchhoff" form of fluctuation–dissipation theorem for distributed systems —M. L. Levin and S. M. Rytov. 38(4), 688–92 (Apr. 1974); CPM-7502X0048

Ryutov, D. D.—Nonlinear Landau damping of a Langmuir wave packet —D. D. Ryutov and V. N. Khudik. 37(4), 637–40 (Oct. 1973); CPM-7407X1379

—Experiments on plasma confinement in a magnetic multimirror trap —G. I. Budker, V. V. Danilov, E. P. Kruglyakov, D. D. Ryutov, and E. V. Shunko. 38(2), 276–82 (Feb. 1974); CPM-7405F0494

Ryzhiĭ, V. I.—Magnetophonon oscillations of the conductivity of semiconductors with hot electrons —V. I. Ryzhiĭ. 37(2), 326–9 (Aug. 1973); CPM-7404E0580

S

Safarov, V. I.—Optical orientation in a system of electrons and lattice nuclei in semiconductors. Experiment —V. L. Berkovits, A. I. Ekimov, and V. I. Safarov. 38(1), 169–76 (Jan. 1974); CPM-7405F0169

Sagdeev, R. Z.—Interaction between an intense electromagnetic wave and a plasma —A. A. Galeev, G. Laval, T. O'Neil, M. N. Rosenbluth, and R. Z. Sagdeev. 38(3), 482–9 (Mar. 1974); CPM-7411X0862

Sakharov, A. E.—Dips in emission lines of preliminarily polarized molecular (atomic) beams —A. S. Bashkin, A. N. Oraevskiĭ, and A. E. Sakharov. 38(3), 454–8 (Mar. 1974); CPM-7411X0834

Salanskiĭ, N. M.—Stabilization of microdomain configurations in two–layer magnetic films —N. M. Salanskiĭ, V. A. Serëdkin, V. A. Burmakin, and A. V. Nabatov. 38(5), 1011–2 (May 1974)

Samarskiĭ, Yu. A.—Investigation of the magnetic hyperfine interaction for impurity tin atoms in dilute Pd–Co solid solutions at low temperatures —N. E. Alekseevskiĭ and Yu. A. Samarskiĭ. 37(4), 681–5 (Oct. 1973); CPM-7407X1423

Samoĭlov, B. N.—Alteration of the superconducting properties of vanadium by introduction of tantalum impurity atoms —N. A. Chernoplekov, G. Kh. Panova, B. N. Samoĭlov, and A. A. Shikov. 37(1), 102–6 (Jul. 1973); CPM-7401D0804

Sarbeĭ, O. G.—Effect of the multivalley structure of the conduction band on helical instability in the electron–hole plasma of silicon —V. M. Bondar, V. V. Vladimirov, N. I. Kononenko, O. G. Sarbeĭ, and A. I. Shchedrin. 38(3), 542–4 (Mar. 1974); CPM-7411X0922

Sarry, M. F.—Allowance for correlation effects in narrow energy bands —N. A. Dmitriev, A. K. Zhitnik, and M. F. Sarry. 37(4), 710–2 (Oct. 1973); CPM-7407X1452

Satarov, L. M.—Bound plasmon–phonon surface states on the interface between a semiconductor and a dielectric —L. M. Satarov. 38(6), 1139 (Jun. 1974)

Savitskiĭ, E. M.—Magnetic properties of compounds of rare–earth metals with iron, of the type RF_3 —K. P. Belov, S. A. Nikitin, A. M. Bisliev, E. M. Savitskiĭ, V. F. Terekhova, and V. E. Kolesnichenko. 37(6), 1086–8 (Dec. 1973); CPM-7412X0134

Savoskin, V. I.—Investigation of equilibrium and stability of self–contracted discharges in an optically dense plasma —A. F. Aleksandrov, V. V. Zosimov, A. A. Rukhadze, V. I. Savoskin, and I. B. Timofeev. 37(5), 794–800 (Nov. 1973); CPM-7410X0134

Savranskiĭ, V. V.—Optical breakdown of gases induced by the thermal explosion of suspended macroscopic particles —F. V. Bunkin and V. V. Savranskiĭ. 38(6), 1091–6 (Jun. 1974)

Sazhin, M. V.—Emission of gravitational waves by an electromagnetic cavity —L. P. Grishchuk and M. V. Sazhin. 38(2), 215–21 (Feb. 1974); CPM-7405F0433

—Electromagnetic detectors of gravitational waves —V. B. Braginskiĭ, L. P. Grishchuk, A. G. Doroshkevich, Ya. B. Zel'dovich, I. D. Novikov, and M. V. Sazhin. 38(5), 865–9 (May 1974)

Selidovkin, A. D.—Two–level system with damping in a plasma —V. I. Kogan, V. S. Lisitsa, and A. D. Selidovkin. 38(1), 75–82 (Jan. 1974); CPM-7405F0075

Sém, M. F.—Laser recombination transitions in CA II and Sr II —E. L. Latush and M. F. Sém. 37(6), 1017–8 (Dec. 1973); CPM-7412X0065

Semenova, E. D.—Resistivities of rubidium and potassium at helium temperatures —B. N. Aleksandrov, O. I. Lomonos, and E. D. Semenova. 37(2), 294–6 (Aug. 1973); CPM-7404E0548

Semibalamut, V. M.—Excitation of ultrashort light pulses in a ruby ring laser with resonance loss modulation —G. V. Krivoshchekov, L. A. Kulevskiĭ, N. G. Nikulin, V. M. Semibalamut, V. A. Smirnov, and V. V. Smirnov. 37(6), 1007–11 (Dec. 1973); CPM-7412X0055

Senchukov, F. D.—Interaction of dislocations with hole centers in colored alkali–halid crystals —F. D. Senchukov and S. Z. Shmurak. 38(6), 1177–80 (Jun. 1974)

Sereda, N. D.—Low frequency instabilities in a linear plasma betatron —E. I. Lutsenko, L. M. Kontsevoĭ, V. A. Bondarenko, and N. D. Sereda. 37(3), 424–8 (Sep. 1973); CPM-7406X1432

Serëdkin, V. A.—Stabilization of microdomain configurations in two–layer magnetic films —N. M. Salanskiĭ, V. A. Serëdkin, V. A. Burmakin, and A. V. Nabatov. 38(5), 1011–2 (May 1974)

Sergeeva, G. G.—Wave excitation by light and by a homogeneous alternating magnetic field —A. S. Bakaĭ and G. G. Sergeeva. 38 (4), 840–6 (Apr. 1974); CPM-7502X0200

Seryugin, A. L.—Mechanism of the luminescene of polymer films during their formation as a result of bombardment of solids with ion beams —V. V. Gritsyna, T. S. Kiyan, A. G. Koval', Ya. M. Fogel', A. L. Seryugin, and I. S. Martynov. 37(1), 108–12 (Jul. 1973); CPM-7401D0810

Shaanova, A. N.—Theory of scattering of electromagnetic waves in a degenerate electron liquid —A. N. Shaanova. 38(6), 1215–9 (Jun. 1974)

Shabat, A. B.—Interaction between solitons in a stable medium —V. E. Zakharov and A. B. Shabat. 37(5), 823–8 (Nov. 1973); CPM-7410X0163

Shaburov, V. A.—Investigation of the electronic mechanism of the isomorphic phase transition in cerium —V. A. Shaburov, I. M. Band, A. I. Grushko, T. B. Mezentseva, E. V. Petrovich, Yu. P. Smirnov, A. E. Sovestnov, O. I. Sumbaev, M. B. Trzhaskovskaya, and I. A. Markova. 38(3), 573–81 (Mar. 1974); CPM-7411X0953

Shakhunov, V. A.—Susceptibility of the ferrite spin system above the parametric excitation threshold —Ya. A. Monosov, V. V. Surin, and V. A. Shakhunov. 38(5), 951–3 (May 1974)

Shal'nikov, A. I.—Electric conductivity and superconducting properties of thin mercury films —V. L. Tsymbalenko and A. I. Shal'nikov. 38(5), 1043–7 (May 1974)

Shapiro, F. L.—Production of very cold neutrons —V. V. Golikov, V. I. Lushchikov, and F. L. Shapiro. 37(1), 41–4 (Jul. 1973); CPM-7401D0743

Shapiro, V. V.—Exciton–magnon absorption of light in antiferromagnetic siderite —V. V. Eremenko, Yu. G. Litvinenko, A. A. Motornaya, V. I. Myatlik, and V. V. Shapiro. 38(3), 608–12 (Mar. 1974); CPM-7411X0988

Shapkin, V. V.—Polarization spectroscopic analysis of noise produced in annihilation of oppositely moving magnetic fields —M. V. Babykin, A. I. Zhuzhunashvili, E. A. Oks, V. V. Shapkin, and G. V. Sholin. 38(1), 86–92 (Jan. 1974); CPM-7405F0086

Shapoval, E. A.—Multipoint energy density correlators for the two–dimensional Ising model —E. A. Shapoval. 38(2), 378–82 (Feb. 1974); CPM-7405F0596

Sharvin, Yu. V.—Radio-frequency size effect in a layer of normal metal bounded by its superconducting phase —I. P. Krylov and Yu. V. Sharvin. 37(3), 481–6 (Sep. 1973); CPM-7406X1489

Shatinskiĭ, V. M.—New data on the alpha decay of Cr^{249} —S. A. Baranov, V. M. Shatinskiĭ, V. M. Kulakov, and Yu. F. Rodionov. 37(6), 993 (Dec. 1973); CPM-7412X0041

Shchedrin, A. I.—Effect of the multivalley structure of the conduction band on helical instability in the electron–hole plasma of silicon —V. M. Bondar, V. V. Vladimirov, N. I. Kononenko, O. G. Sarbeĭ, and A. I. Shchedrin. 38(3), 542–4 (Mar. 1974); CPM-7411X0922

Shcheglov, V. A.—Nonequilibrium vibrational kinetics of molecules in the presence of the field of resonant laser emission —N. G. Basov, A. N. Oraevskiĭ, A. A. Stepanov, and V. A. Shcheglov. 38(5), 918–26 (May 1974)

Shcherbakov, I. A.—Effect of donor–donor and donor–acceptor interactions on the decay kinetics of the metastable state of Nd^{3+} in crystals —Yu. K. Voron'ko, T. G. Mamedov, V. V. Osiko, M. I. Timoshechkin, and I. A. Shcherbakov. 38(3), 565–72 (Mar. 1974); CPM-7411X0945

Shchetkin, I. S.—Superconductivity and electron structure of a solid solution of titanium in niobium —I. S. Shchetkin and T. N. Kharchenko. 37(3), 491–3 (Sep. 1973); CPM-7406X1499

Sheka, V. I.—Theory of polarons in multivalley crystals. III. Arbitrary coupling force between the electron and the lattice polarization vibrations —S. I. Pekar, L. S. Khazan, and V. I. Sheka. 38(5), 999–1002 (May 1974)

Shekhter, R. I.—Kinetics of conduction electrons in multidomain ferromagnetic structures —R. I. Shekhter and A. S. Rozhavskiĭ. 38 (2), 383–5 (Feb. 1974); CPM-7405F0601

Shelaev, A. N.—Oscillation regimes in a rotating solid–state ring laser —E. L. Klochan, L. S. Kornienko, N. V. Kravtsov, E. G. Lariontsev, and A. N. Shelaev. 38(4), 669–74 (Apr. 1974); CPM-7502X0029

Shender, E. F.—Effect of oscillating interaction between magnetic impurities on the properties of dilute magnetic alloys —I. Ya. Korenblit and E. F. Shender. 37(1), 159–63 (Jul. 1973); CPM-7401D0861

—Spin waves and density of states in disordered ferromagnetic substances —S. L. Ginzburg, I. Ya. Korenblit, and E. F. Shender. 37(6), 1141–7 (Dec. 1973); CPM-7412X0189

Sherman, S. G.—Relativistic compton effect on the bound electron —V. G. Gorshkov, A. I. Mikhaĭlov, and S. G. Sherman. 37(4), 572–8 (Oct. 1973); CPM-7407X1314

Shevchenko, S. A.—Effect of dislocations on the electric properties of p–germanium —Yu. A. Osip'yan and S. A. Shevchenko. 38(2), 345–8 (Feb. 1974); CPM-7405F0563

Shevchenko, S. I.—On the theory of the inelastic tunnel effect in normal metals —S. I. Shevchenko. 37(5), 897–901 (Nov. 1973); CPM-7410X0237

Shikanov, A. S.—Investigation of the reflection of laser radiation from a dense plasma —A. A. Rupasov, G. V. Sklizkov, V. P. Tsapenko, and A. S. Shikanov. 38(5), 947–50 (May 1974)

Shikhlyarov, K. K.—Investigation of x–ray transition radiation in foamed plastic —A. I. Alikhanyan, É. S. Belyakov, M. P. Lorikyan, K. Jh. Makaryan, and K. K. Shikhlyarov. 38(4), 663–5 (Apr. 1974); CPM-7502X0023

Shikin, V. B.—Interaction between impurity excitations and negative ions in liquid helium —V. B. Shikin. 37(4), 718–22 (Oct. 1973); CPM-7407X1460

—Free electrons on the surface of liquid helium in the presence of external fields —V. B. Shikin and Yu. P. Monarkha. 38(2), 373–7 (Feb. 1974); CPM-7405F0591

Shikov, A. A.—Alteration of the superconducting properties of vanadium by introduction of tantalum impurity atoms —N. A. Chernoplekov, G. Kh. Panova, B. N. Samoĭlov, and A. A. Shikov. 37(1), 102–6 (Jul. 1973); CPM-7401D0804

Shimanskaya, E. T.—Experimental investigation of some peculiarities of the equation of state of heptane near the critical point —L. M. Artyukhovskaya, E. T. Shimanskaya, and Yu. I. Shimanskiĭ. 37(5), 848–51 (Nov. 1973); CPM-7410X0188

Shimanskiĭ, Yu. I.—Experimental investigation of some peculiarities of the equation of state of heptane near the critical point —L. M. Artyukhovskaya, E. T. Shimanskaya, and Yu. I. Shimanskiĭ. 37(5), 848–51 (Nov. 1973); CPM-7410X0188

Shipko, M. N.—Magnetic structure and localization of Co^{2+} and Fe^{2+} ions in hexagonal ferrites —V. F. Belov, T. A. Khimich, M. N. Shipko, I. S. Zheludev, E. V. Korneev, and N. S. Ovanesyan. 37(6), 1089–95 (Dec. 1973); CPM-7412X0137

Shklovskiĭ, B. I.—Localization of electrons in a magnetic field —B. I. Shklovskiĭ and A. L. Éfros. 37(6), 1122–7 (Dec. 1973); CPM-7412X0170

Shklovskiĭ, E. I.—Effect of magnetic field on soft x–ray radiation from laser plasma —T. B. Volyak, S. D. Kaĭtmazov, A. M. Prokhorov, and E. I. Shklovskiĭ. 37(2), 245–6 (Aug. 1973); CPM-7404E0499

Shklyar, D. R.—Nonlinear theory of a quasimonochromatic packet of electrostatic waves in an inhomogeneous plasma —Ya. N. Istomin, V. I. Karpman, and D. R. Shklyar. 37(6), 1045–50 (Dec. 1973)

Shklyarevskiĭ, I. N.—Temperature dependence of the optical properties and the energy spectrum of zinc —R. G. Yarovaya, I. N. Shklyarevskiĭ, and A. F. A. El–Shazly. 38(2), 331–4 (Feb. 1974); CPM-7405F0549

Shliomis, M. I.—On the kinetics of magnetization of suspensions of ferromagnetic particles —M. A. Martsenyuk, Yu. L. Raĭkher, and M. I. Shliomis. 38(2), 413–6 (Feb. 1974); CPM-7405F0631

Shmakov, N. G.—The equation of state and the isochoric specific heat near the critical points of liquids —A. T. Berestov, M. Sh. Giterman, and N. G. Shmakov. 37(6), 1128–32 (Dec. 1973); CPM-7412X0176

Shmiglyuk, M. I.—Bose–Einstein condensation of dipole–active excitons and photons —S. A. Moskalenko, M. F. Migleĭ, M. I. Shmiglyuk, P. I. Khadzhi, and A. V. Lelyakov. 37(5), 902–8 (Nov. 1973); CPM-7410X0242

Shmikk, D. V.—The mass–reflectron, a new nonmagnetic time–of–fight mass spectrometer with high resolution —B. A. Mamyrin, V. I. Karataev, D. V. Shmikk, and V. A. Zagulin. 37(1), 45–8 (Jul. 1973); CPM-7401D0747

Shmurak, S. Z.—Interaction of dislocations with hole centers in colored alkali–halid crystals —F. D. Senchukov and S. Z. Shmurak. 38(6), 1177–80 (Jun. 1974)

Shneerson, V. L.—Phase transitions of the displacement type in crystals at very low temperatures —D. E. Khmel'nitskiĭ and V. L. Shneerson. 37(1), 164–70 (Jul. 1973); CPM-7401D0866

Sholin, G. V.—Theory of Stark broadening of hydrogen lines in plasma —G. V. Sholin, A. V. Demura, and V. S. Lisitsa. 37(6), 1057–65 (Dec. 1973); CPM-7412X0105

—Polarization spectroscopic analysis of noise produced in annihilation of oppositely moving magnetic fields —M. V. Babykin, A. I. Zhuzhunashvili, E. A. Oks, V. V. Shapkin, and G. V. Sholin. 38 (1), 86–92 (Jan. 1974); CPM-7405F0086

Shpenik, O. B.—Resonance effects in inelastic collisions of slow electrons with cadmium and zinc atoms —O. B. Shpenik, I. P. Zapesochnyĭ, V. V. Sovter, E. É. Kontrosh, and A. N. Zavilopulo. 38(5), 898–902 (May 1974)

Shtil'man, L. E.—Stimulated temperature scattering of electromagnetic waves in a plasma with collisions —N. A. Mityakov, M. I. Rabinovich, V. O. Rapoport, and L. E. Shtil'man. 38(5), 944–6 (May 1974)

Shtol'berg, A. A.—Dynamic scattering of x–rays by dislocations —F. N. Chukhovskiĭ and A. A. Shtol'berg. 37(3), 525–9 (Sep. 1973); CPM-7406X1533

Shtol'ts, E. V.—On the nature of the magnetization discontinuity in MnBi —E. V. Shtol'ts and N. G. Kaunov. 38(4), 723–6 (Apr. 1974); CPM-7502X0083

Shukhman, V. A.—Magnetic flux pinning in a type–I superconductor in the intermediate state —L. M. Kano and V. A. Shukhman. 37 (3), 452–7 (Sep. 1973); CPM-7406X1460

Shunko, E. V.—Experiments on plasma confinement in a magnetic multimirror trap —G. I. Budker, V. V. Danilov, E. P. Kruglyakov, D. D. Ryutov, and E. V. Shunko. 38(2), 276–82 (Feb. 1974); CPM-7405F0494

Shuryak, E. V.—The radiations emitted by an ultrarelativistic particle in a gravitational field —I. B. Khriplovich and E. V. Shuryak. 38 (6), 1067–8 (Jun. 1974)

Shustin, E. G.—Investigation of the mechanism of excitation of stochastic oscillations in a beam–plasma discharge —V. A. Lavrovskiĭ, I. F. Kharchenko, and E. G. Shustin. 38(6), 1117–23 (Jun. 1974)

Shvarts, K. K.—Conduction electron spin echo in metals —V. A. Zhikharev, A. R. Kessel', É. G. Kharakhash'yan, F. G. Cherkasov, and K. K. Shvarts. 37(4), 689–94 (Oct. 1973); CPM-7407X1431

Silin, V. P.—Quasilinear theory of a parametrically unstable magnetoactive plasma —V. V. Pustovalov, V. P. Silin, and V. T. Tikhonchuk. **37**(3), 429–35 (Sep. 1973); CPM-7406X1437

—Nonlinear dissipation of electromagnetic waves in a plasma —V. V. Pustovalov and V. P. Silin. **38**(1), 96–101 (Jan. 1974); CPM-7405F0096

—Nonlinear conversion of radiation into plasma waves —V. V. Pustovalov, V. P. Silin, and V. T. Tikhonchuk. **38**(5), 938–43 (May 1974)

Sinitsyn, V. I.—Development of instabilities in a Z-pinch —S. M. Osovets, E. I. Pavlov, and V. I. Sinitsyn. **37**(4), 625–8 (Oct. 1973); CPM-7407X1367

Sizonenko, V. L.—Electron-acoustic and drift instabilities in a finite-pressure plasma with a perpendicular current —J. P. Goedbloed, A. I. Pyatak, and V. L. Sizonenko. **37**(6), 1051–6 (Dec. 1973); CPM-7412X0099

Sklizkov, G. V.—Investigation of the reflection of laser radiation from a dense plasma —A. A. Rupasov, G. V. Sklizkov, V. P. Tsapenko, and A. S. Shikanov. **38**(5), 947–50 (May 1974)

Sklyarevskiĭ, V. V.—Interference of nuclear and electron scatterings of 14.4 keV resonance γ-ray in Bragg reflection from an α-Fe_2O_3 crystal —A. N. Artem'ev, I. P. Perstnev, V. V. Sklyarevskiĭ, G. V. Smirnov, and E. P. Stepanov. **37**(1), 136–41 (Jul. 1973); CPM-7401D0838

—Suppression effect under conditions of purely nuclear Laue diffraction of resonant γ rays —V. V. Sklyarevskiĭ, G. V. Smirnov, A. N. Artem'ev, R. M. Mirzababaev, and E. P. Stepanov. **37**(3), 474–5 (Sep. 1973); CPM-7406X1482

Skobov, V. G.—Surface resistance of cadmium in a magnetic field —V. V. Lavrova, S. V. Medvedev, V. G. Skobov, L. M. Fisher, and V. A. Yudin. **37**(5), 929–36 (Nov. 1973); CPM-7410X0269

—Surface resistance of a cadmium plate in a magnetic field —V. V. Lavrova, S. V. Medvedev, V. G. Skobov, L. M. Fisher, and V. A. Yudin. **38**(2), 349–53 (Feb. 1974); CPM-7405F0567

Skrebnev, V. A.—Nuclear relaxation in SrF_2 —F. L. Aukhadeev, I. I. Valeev, and V. A. Skrebnev. **37**(5), 857–8 (Nov. 1973); CPM-7410X0197

—Proton relaxation in dilute rare-earth ethyl sulfates —I. I. Valeev, V. A. Skrebnev, and F. L. Aukhadeev. **38**(3), 593–6 (Mar. 1974); CPM-7411X0973

Skripov, V. P.—Attainable overheating of liquid argon —V. G. Baĭdakov, V. P. Skripov, and A. M. Kaverin. **38**(3), 557–60 (Mar. 1974); CPM-7411X0937

Skulachenko, S. S.—A method for measuring collision broadening of spectral lines —B. V. Rybakov, S. S. Skulachenko, A. M. Khromykh, and I. I. Yudin. **37**(4), 582–3 (Oct. 1973); CPM-7407X1324

Slavyanov, S. Yu.—On the theory of open resonators —S. Yu. Slavyanov. **37**(3), 399–403 (Sep. 1973); CPM-7406X1407

Slutskin, A. A.—Quantum-kinetic equation and magnetoresistance of metals with allowance for magnetic breakdown —A. A. Slutskin. **38**(5), 1057–66 (May 1974)

Smirnov, A. I.—Optical frequency modulation of electrons diffracted by a crystal —V. V. Fedorov, K. E. Kir'yanov, and A. I. Smirnov. **37**(4), 737–8 (Oct. 1973); CPM-7407X1479

Smirnov, G. I.—Collisional averaging of the stark and Zeeman spectrum structure —A. I. Burshtĕin and G. I. Smirnov. **38**(6), 1085–90 (Jun. 1974)

Smirnov, G. V.—Interference of nuclear and electron scatterings of 14.4 keV resonance γ-ray in Bragg reflection from an α-Fe_2O_3 crystal —A. N. Artem'ev, I. P. Perstnev, V. V. Sklyarevskiĭ, G. V. Smirnov, and E. P. Stepanov. **37**(1), 136–41 (Jul. 1973); CPM-7401D0838

—Suppression effect under conditions of purely nuclear Laue diffraction of resonant γ rays —V. V. Sklyarevskiĭ, G. V. Smirnov, A. N. Artem'ev, R. M. Mirzababaev, and E. P. Stepanov. **37**(3), 474–5 (Sep. 1973); CPM-7406X1482

Smirnov, V. A.—Excitation of ultrashort light pulses in a ruby ring laser with resonance loss modulation —G. V. Krivoshchekov, L. A. Kulevskiĭ, N. G. Nikulin, V. M. Semibalamut, V. A. Smirnov, and V. V. Smirnov. **37**(6), 1007–11 (Dec. 1973); CPM-7412X0055

Smirnov, V. V.—Excitation of ultrashort light pulses in a ruby ring laser with resonance loss modulation —G. V. Krivoshchekov, L. A. Kulevskiĭ, N. G. Nikulin, V. M. Semibalamut, V. A. Smirnov, and V. V. Smirnov. **37**(6), 1007–11 (Dec. 1973); CPM-7412X0055

Smirnov, Yu. P.—Investigation of the electronic mechanism of the isomorphic phase transition in cerium —V. A. Shaburov, I. M. Band, A. I. Grushko, T. B. Mezentseva, E. V. Petrovich, Yu. P. Smirnov, A. E. Sovestnov, O. I. Sumbaev, M. B. Trzhaskovskaya, and I. A. Markova. **38**(3), 573–81 (Mar. 1974); CPM-7411X0953

Smirnova, E. A.—Direct observation of the picosecond structure of radiation pulses from a mode-locked neodymium laser —N. G. Basov, M. M. Butslov, P. G. Kryukov, Yu. A. Matveev, E. A. Smirnova, B. M. Stepanov, S. D. Fanchenko, S. V. Chekalin, and R. V. Chikin. **38**(3), 449–53 (Mar. 1974); CPM-7411X0829

Smirnova, L. M.—Observation of the negative induction effect by bound hydrogen capture of π^- mesons —L. Vil'gel'mova, P. Zimrot, V. I. Petrukhin, V. E. Risin, L. M. Smirnova, V. M. Suvorov, and I. A. Yutlandov. **38**(1), 12–3 (Jan. 1974); CPM-7405F0012

—Search for structural effects in π^- meson capture by hydrogen in complex molecules —Z. V. Krumshtein, V. I. Petrukhin, V. E. Risin, L. M. Smirnova, V. M. Suvorov, and I. A. Yutlandov. **38**(2), 222–3 (Feb. 1974); CPM-7405F0440

Smolenko, L. A.—Behavior of the specific heat of the ferroelectric phase of KH_2PO_4 near the transition temperature —S. R. Garber and L. A. Smolenko. **37**(1), 94–101 (Jul. 1973); CPM-7401D0796

Snezhkin, E. N.—Quasistationary supercooled (recombining) plasma produced by an electron beam in a dense gas —S. V. Antipov, M. V. Nezlin, E. N. Snezhkin, and A. S. Trubnikov. **38**(5), 931–7 (May 1974)

Sobel'man, I. I.—Contribution to the theory of nonlinear power resonances in gas lasers —V. A. Alekseev, T. L. Andreeva, and I. I. Sobel'man. **37**(3), 413–8 (Sep. 1973); CPM-7406X1421

Sobolev, N. N.—Kinetic model of formation of inverse populations in a carbon monoxide gas-discharge laser —N. N. Sobolev, V. V. Sokovikov, and V. G. Taranenko. **38**(1), 44–8 (Jan. 1974); CPM-7405F0044

Sobolev, S. S.—Interaction between a high frequency magnetic field and potential plasma oscillations in a Q-device —L. L. Artsimovich, A. A. Ivanov, A. N. Luk'yanchuk, V. L. Papernyĭ, V. D. Rusanov, and S. S. Sobolev. **37**(2), 236–9 (Aug. 1973); CPM-7404E0490

Sobolev, V. L.—Damping of spin waves in antiferromagnetic substances with magnetic anisotropy of the "easy plane" type —V. G. Bar'yakhtar, V. L. Sobolev, and A. G. Kvirikadze. **38**(2), 392–8 (Feb. 1974); CPM-7405F0610

Soboleva, T. K.—Thermal ionization wave in a current-carrying system —A. A. Ivanov, V. V. Parail, and T. K. Soboleva. **37**(4), 633–6 (Oct. 1973); CPM-7407X1375

Sokhanenkov, Yu. N.—Magnetic hyperfine interaction for Co^{60} in PdRhCo alloys —A. L. Erzinkyan, V. P. Parfenova, and Yu. N. Sokhanenkov. **37**(3), 487–90 (Sep. 1973); CPM-7406X1495

Sokolov, I. V.—Collective spontaneous emission by polyatomic systems —I. V. Sokolov and E. D. Trifonov. **38**(1), 37–40 (Jan. 1974); CPM-7405F0037

Sokolov, V. I.—Specific heat of the antiferromagnetic garnet $Ca_3Mn_2Ge_3O_{12}$ —K. P. Belov, T. V. Valyanskaya, L. G. Mamsurova, and V. I. Sokolov. **38**(3), 561–4 (Mar. 1974); CPM-7411X0941

Sokolov, V. N.—Phase transition in multivalley semiconductors in a magnetic field —V. A. Kochelap and V. N. Sokolov. **38**(2), 408–12 (Feb. 1974); CPM-7405F0626

Sokolovskaya, A. I.—Fine structure of stimulated Raman scattering line in substances with small kerr constants —E. A. Morozova, A. I. Sokolovskaya, and M. M. Suschinskiĭ. **38**(6), 1079–81 (Jun. 1974)

Sokovikov, V. V.—Kinetic model of formation of inverse populations in a carbon monoxide gas-discharge laser —N. N. Sobolev, V. V. Sokovikov, and V. G. Taranenko. **38**(1), 44–8 (Jan. 1974); CPM-7405F0044

Sonin, É. B.—Critical velocities at very low temperatures, and the vortices in a quantum bose fluid —É. B. Sonin. **37**(3), 494–500 (Sep. 1973); CPM-7406X1502

Soskin, M. S.—Frequency tunable of giant pulses in spectrally inhomogeneous media —V. B. Markov, T. Ya. Marusiĭ, M. S. Soskin, and A. I. Khizhnyak. **37**(5), 778–83 (Nov. 1973); CPM-7410X0118

Sovestnov, A. E.—Investigation of the electronic mechanism of the isomorphic phase transition in cerium —V. A. Shaburov, I. M. Band, A. I. Grushko, T. B. Mezentseva, E. V. Petrovich, Yu. P. Smirnov, A. E. Sovestnov, O. I. Sumbaev, M. B. Trzhaskovskaya, and I. A. Markova. **38**(3), 573–81 (Mar. 1974); CPM-7411X0953

Sovter, V. V.—Resonance effects in inelastic collisions of slow electrons with cadmium and zinc atoms —O. B. Shpenik, I. P. Zapesochnyĭ, V. V. Sovter, E. É. Kontrosh, and A. N. Zavilopulo. **38**(5), 898–902 (May 1974)

Starobinets, S. S.—Theory of magnetization self-oscillations on parametric excitation of spin waves —V. S. L'vov, S. L. Musher, and S. S. Starobinets. **37**(3), 546–51 (Sep. 1973); CPM-7406X1554

Starobinskiĭ, A. A.—Amplification of waves during reflection from a rotating "black hole" —A. A. Starobinskiĭ. **37**(1), 28–32 (Jul. 1973); CPM-7401D0730

—Amplification of electromagnetic and gravitational waves scattered by a rotating "black hole" —A. A. Starobinskiĭ and S. M. Churilov. **38**(1), 1–5 (Jan. 1974); CPM-7405F0001

Statnikov, Yu. G.—Effect of ultrasonic surface waves on liquid crystals —O. A. Kapustina and Yu. G. Statnikov. **37**(1), 117–9 (Jul. 1973); CPM-7401D0819

Stel'makh, O. M.—Dissociation and belaching of a multilevel molecular gas by high power CO_2 laser radiation —N. V. Karlov, N. A. Karpov, Yu. N. Petrov, and O. M. Stel'makh. **37**(6), 1012–6 (Dec. 1973); CPM-7412X0060

Stepanenko, M. M.—Development of instability and the neutron emission by a Z-pinch —V. V. Aleksandrov, N. G. Koval'skiĭ, S. Yu. Lukyanov, V. A. Rantsev-Kartinov, and M. M. Stepanenko. **37**(4), 622–4 (Oct. 1973); CPM-7407X1364

Stepanov, A. A.—Nonequilibrium vibrational kinetics of molecules in the presence of the field of resonant laser emission —N. G. Basov, A. N. Oraevskiĭ, A. A. Stepanov, and V. A. Shcheglov. **38**(5), 918–26 (May 1974)

Stepanov, B. M.—Direct observation of the picosecond structure of radiation pulses from a mode-locked neodymium laser —N. G. Basov, M. M. Butslov, P. G. Kryukov, Yu. A. Matveev, E. A. Smirnova, B. M. Stepanov, S. D. Fanchenko, S. V. Chekalin, and R. V. Chikin. **38**(3), 449–53 (Mar. 1974); CPM-7411X0829

Stepanov, E. P.—Interference of nuclear and electron scatterings of 14.4 keV resonance γ-ray in Bragg reflection from an α-Fe_2O_3 crystal —A. N. Artem'ev, I. P. Perstnev, V. V. Sklyarevskiĭ, G. V. Smirnov, and E. P. Stepanov. **37**(1), 136–41 (Jul. 1973); CPM-7401D0838

—Suppression effect under conditions of purely nuclear Laue diffraction of resonant γ rays —V. V. Sklyarevskiĭ, G. V. Smirnov, A. N. Artem'ev, R. M. Mirzababaev, and E. P. Stepanov. **37**(3), 474–5 (Sep. 1973); CPM-7406X1482

Stepanov, K. N.—Parametric instabilities in a plasma containing two types of ions —A. B. Kitsenko and K. N. Stepanov. **37**(5), 813–9 (Nov. 1973); CPM-7410X0153

Stoĭlov, Yu. Yu.—Similarity of photodissociation waves and experimental determination of the primary period of the photochemical process —B. L. Borovich, V. Ya. Karpov, N. I. Kozlov, and Yu. Yu. Stoĭlov. **37**(4), 616–8 (Oct. 1973); CPM-7407X1358

Strel'tsov, V. N.—Acoustic perturbations in a medium by the motion of a light focus —V. N. Lugovoĭ and V. N. Strel'tsov. **38**(4), 701–4 (Apr. 1974); CPM-7502X0061

Stroĭlov, Yu. S.—Plastic deformation of solidified inert gases —I. N. Krupskiĭ, A. V. Leont'eva, and Yu. S. Stroĭlov. **38**(5), 957–9 (May 1974)

Strunin, B. M.—Dissipation of the energy of a dislocation moving in a random field of internal stresses —A. A. Alekseev and B. M. Strunin. **38**(6), 1144–6 (Jun. 1974)

Stuchebnikov, V. M.—Magnetocaloric effect in a superparamagnet —V. M. Belova, V. I. Nikolaev, and V. M. Stuchebnikov. **37**(5), 881–2 (Nov. 1973); CPM-7410X0221

Suchkov, A. F.—Electric ionization lasers —N. G. Basov, É. M. Belenov, V. A. Danilychev, O. M. Kerimov, I. B. Kovsh, A. S. Podsosonnyĭ, and A. F. Suchkov. **37**(1), 58–64 (Jul. 1973); CPM-7401D0760

Sukharevskiĭ, B. Ya.—Thermal conductivity and the temperature dependences of the energy gaps of niobium samples containing large amounts of impurity atoms —E. E. Anders, B. Ya. Sukharevskiĭ, and I. V. Volchok. **37**(5), 852–6 (Nov. 1973); CPM-7410X0192

Sukhodrev, N. K.—Spectral diagnostics of the plasma plume produced in intense metal evaporation under laser radiation —V. A. Batanov, V. A. Bogatyrev, N. K. Sukhodrev, and V. B. Fedorov. **37**(3), 419–23 (Sep. 1973); CPM-7406X1427

Sukhoparov, V. A.—Influence of hydrostatic pressure on the splitting of the Landau levels in tellurium —V. B. Anzin, M. S. Bresler, E. S. Itskevich, Yu. V. Kosichkin, V. A. Sukhoparov, A. N. Tolmachev, and I. I. Farbshtein. **38**(4), 755–8 (Apr. 1974); CPM-7502X0115

Sulek, P.—"Needle" Vavilov–Cerenkov radiation in a Rochelle salt crystal —V. P. Zrelov, P. Pavlovich, and P. Sulek. **37**(1), 127–31 (Jul. 1973); CPM-7401D0829

Sumbaev, O. I.—Investigation of the electronic mechanism of the isomorphic phase transition in cerium —V. A. Shaburov, I. M. Band, A. I. Grushko, T. B. Mezentseva, E. V. Petrovich, Yu. P. Smirnov, A. E. Sovestnov, O. I. Sumbaev, M. B. Trzhaskovskaya, and I. A. Markova. **38**(3), 573–81 (Mar. 1974); CPM-7411X0953

Surin, V. V.—Susceptibility of the ferrite spin system above the parametric excitation threshold —Ya. A. Monosov, V. V. Surin, and V. A. Shakhunov. **38**(5), 951–3 (May 1974)

Suschinskiĭ, M. M.—Fine structure of stimulated Raman scattering line in substances with small kerr constants —E. A. Morozova, A. I. Sokolovskaya, and M. M. Suschinskiĭ. **38**(6), 1079–81 (Jun. 1974)

Suslin, L. A.—Paramagnetic relaxation due to plasma oscillations of the current carriers —M. F. Deĭgen, L. A. Suslin, and L. Yu. Mel'nikov. **38**(4), 824–6 (Apr. 1974); CPM-7502X0184

Suvorov, V. M.—Observation of the negative induction effect by bound hydrogen capture of π^- mesons —L. Vil'gel'mova, P. Zimrot, V. I. Petrukhin, V. E. Risin, L. M. Smirnova, V. M. Suvorov, and I. A. Yutlandov. **38**(1), 12–3 (Jan. 1974); CPM-7405F0012

—Search for structural effects in π^- meson capture by hydrogen in complex molecules —Z. V. Krumshtein, V. I. Petrukhin, V. E. Risin, L. M. Smirnova, V. M. Suvorov, and I. A. Yutlandov. **38**(2), 222–3 (Feb. 1974); CPM-7405F0440

Suzdalev, I. P.—Investigation of the superparamagnetic properties of ultrafine iron particles by Mössbauer spectroscopy —A. P. Amulyavichus and I. P. Suzdalev. **37**(5), 859–63 (Nov. 1973); CPM-7410X0199

—Magnetic properties of ultrafine iron oxide particles —Yu. F. Krupyanskiĭ and I. P. Suzdalev. **38**(4), 859–64 (Apr. 1974); CPM-7502X0219

Sysoev, V. M.—Critical fluctuations in external fields —E. L. Lakoza, V. M. Sysoev, and A. V. Chalyĭ. **38**(2), 298–303 (Feb. 1974); CPM-7405F0516

Syunyaev, R. A.—Scattering of radiation by thermal electrons in a magnetic field —Yu. N. Gnedin and R. A. Syunyaev. **38**(1), 51–7 (Jan. 1974); CPM-7405F0051

T

Talalaev, M. A.—Magnetic birefringence of light in antiferromagnetic transition–metal fluorides —A. S. Borovik-Romanov, N. M. Kreĭnes, A. A. Pankov, and M. A. Talalaev. **37**(5), 890–6 (Nov. 1973); CPM-7410X0230

Talalaeva, E. V.—Magnetocaloric effect in compounds of rare–earth metals with iron —S. A. Nikitin, E. V. Talalaeva, L. A. Chernikova, and A. S. Andreenko. **38**(5), 1028–30 (May 1974)

Tal'rose, V. L.—Vibrational relaxation of HF and DF in a shock wave —G. K. Vasil'ev, E. F. Makarov, V. G. Papin, and V. L. Tal'rose. **37**(6), 1031–3 (Dec. 1973); CPM-7412X0079

Tal'yanskiĭ, V. I.—On the polarizability of tunneling defects —G. A. Andreev, V. I. Tal'yanskiĭ, and V. M. Fain. **37**(3), 458–61 (Sep. 1973); CPM-7406X1466

Tamoĭkin, V. V.—Nonlinear ion–sound waves in a plasma with three–dimensional random inhomogeneities —V. V. Tamoĭkin and S. M. Faĭnshteĭn. **37**(2), 257–9 (Aug. 1973); CPM-7404E0511

Taranenko, V. G.—Kinetic model of formation of inverse populations in a carbon monoxide gas–discharge laser —N. N. Sobolev, V. V. Sokovikov, and V. G. Taranenko. **38**(1), 44–8 (Jan. 1974); CPM-7405F0044

Tarasov, S. P.—Nonlinear interaction of space–charge waves with trapped electrons —A. A. Ivanov, S. M. Korshunov, N. S. Beryuleva, and S. P. Tarasov. **38**(5), 927–30 (May 1974)

Tarasov, Yu. V.—Propagation of surface acoustic waves in metals in a magnetic field —A. M. Grishin and Yu. V. Tarasov. **38**(4), 783–8 (Apr. 1974); CPM-7502X0143

Tatarskiĭ, V. I.—Quantum fluctuations in the photon flux in vacuum and in the diffraction pattern —V. U. Zavorotnyĭ and V. I. Tatarskiĭ. **37**(2), 231–5 (Aug. 1973); CPM-7404E0485

Tenishev, A. E.—Polarization of protons from the $\gamma+p\to\pi^0+p$ reaction produced by 692–1028 MeV photons at 90° in the center-of-mass system —N. V. Goncharov, A. I. Derebchinskiĭ, A. A. Zybalov, O. G. Konovalov, A. E. Tenishev, S. G. Tonapetyan, and V. M. Khvorostyan. **37**(2), 205–7 (Aug. 1973); CPM-7404E0459

Terekhova, V. F.—Magnetic properties of compounds of rare-earth metals with iron, of the type RF_3 —K. P. Belov, S. A. Nikitin, A. M. Bisliev, E. M. Savitskiĭ, V. F. Terekhova, and V. E. Kolesnichenko. **37**(6), 1086–8 (Dec. 1973); CPM-7412X0134

Tikhonchuk, V. T.—Quasilinear theory of a parametrically unstable magnetoactive plasma —V. V. Pustovalov, V. P. Silin, and V. T. Tikhonchuk. **37**(3), 429–35 (Sep. 1973); CPM-7406X1437

—Nonlinear conversion of radiation into plasma waves —V. V. Pustovalov, V. P. Silin, and V. T. Tikhonchuk. **38**(5), 938–43 (May 1974)

Timerov, R. Kh.—Theory of superconductivity in systems with an inverse distribution —V. F. Elesin, Yu. V. Kopaev, and R. Kh. Timerov. **38**(6), 1170–6 (Jun. 1974)

Timofeev, I. B.—Investigation of equilibrium and stability of self-contracted discharges in an optically dense plasma —A. F. Aleksandrov, V. V. Zosimov, A. A. Rukhadze, V. I. Savoskin, and I. B. Timofeev. **37**(5), 794–800 (Nov. 1973); CPM-7410X0134

Timoshechkin, M. I.—Effect of donor–donor and donor–acceptor interactions on the decay kinetics of the metastable state of Nd^{3+} in crystals —Yu. K. Voron'ko, T. G. Mamedov, V. V. Osiko, M. I. Timoshechkin, and I. A. Shcherbakov. **38**(3), 565–72 (Mar. 1974); CPM-7411X0945

Tishchenko, A. V.—Investigation of the $BaMnF_4$ phase diagram by the antiferromagnetic resonance technique —A. V. Tishchenko, B. I. Al'shin, and D. N. Astrov. **38**(4), 789–93 (Apr. 1974); CPM-7502X0149

Tkachenko, V. K.—Oscillation spectrum of the von Karman vortex street —V. K. Tkachenko. **37**(6), 1148–9 (Dec. 1973); CPM-7412X0196

Tolmachev, A. N.—Influence of hydrostatic pressure on the splitting of the Landau levels in tellurium —V. B. Anzin, M. S. Bresler, E. S. Itskevich, Yu. V. Kosichkin, V. A. Sukhoparov, A. N. Tolmachev, and I. I. Farbshtein. **38**(4), 755–8 (Apr. 1974); CPM-7502X0115

Tolstolutskaya, G. D.—Composition of the slow ions produced upon ionization of gases by high energy protons —Yu. Z. Levchenko, L. I. Pivovar, and G. D. Tolstolutskaya. **37**(6), 1004–6 (Dec. 1973); CPM-7412X0052

Tolstoluzhsky, A. P.—Electron beam excitation of regular oscillations in an inhomogeneous plasma waveguide —S. S. Kalmykova, V. I. Kurilko, V. I. Kucherov, and A. P. Tolstoluzhsky. **37**(2), 240–Q44 (Aug. 1973); CPM-7404E0494

Tonapetyan, S. G.—Photoproduction of π mesons from C^{12} in the photon-energy range from 250 to 1200 MeV —N. V. Goncharov, A. I. Derebchinskiĭ, O. G. Konovalov, S. G. Tonapetyan, and V. M. Khvorostyan. **37**(1), 38–40 (Jul. 1973); CPM-7401D0740

—Polarization of protons from the $\gamma+p\to\pi^0+p$ reaction produced by 692–1028 MeV photons at 90° in the center-of-mass system —N. V. Goncharov, A. I. Derebchinskiĭ, A. A. Zybalov, O. G. Konovalov, A. E. Tenishev, S. G. Tonapetyan, and V. M. Khvorostyan. **37**(2), 205–7 (Aug. 1973); CPM-7404E0459

Travnikov, V. S.—Effect of spatial dispersion of carrier electric conductivity on the light- (radio-) electric effect in a strong magnetic field —L. É. Gurevich and V. S. Travnikov. **38**(2), 335–8 (Feb. 1974); CPM-7405F0553

Tret'yakov, B. N.—Nuclear magnetic resonance of V^{51} in a V_3Si single crystal —B. N. Tret'yakov, V. A. Marchenko, V. B. Kuritsin, and B..N. Kodess. **38**(4), 772–4 (Apr. 1974); CPM-7502X0132

Trifonov, E. D.—Collective spontaneous emission by polyatomic systems —I. V. Sokolov and E. D. Trifonov. **38**(1), 37–40 (Jan. 1974); CPM-7405F0037

Troyan, V. I.—Kinetic phenomena in a Knudsen gas with rotational degrees of freedom —V. D. Borman, L. A. Maksimov, B. I. Nikolaev, and V. I. Troyan. **37**(2), 269–73 (Aug. 1973); CPM-7404E0523

Trubnikov, A. S.—Quasistationary supercooled (recombining) plasma produced by an electron beam in a dense gas —S. V. Antipov, M. V. Nezlin, E. N. Snezhkin, and A. S. Trubnikov. **38**(5), 931–7 (May 1974)

Trunin, R. F.—Synthesis of a high-density phase of silicon dioxide in shock waves —V. N. German, M. A. Podurets, and R. F. Trunin. **37**(1), 107 (Jul. 1973); CPM-7401D0809

Truten', V. I.—Asymptotics of the Green function and the charge renormalization constant in scalar electrodynamics in the $\alpha_0(\alpha_0 L)^n$-approximation —V. I. Truten'. **37**(6), 977–82 (Dec. 1973); CPM-7412X0025

Trzebiatowski, V.—Magnetic anisotropy of the uranium compounds UAsS and UAsSe —K. P. Belov, A. S. Dmitrievskiĭ, A. Zygmunt, R. Z. Levitin, and V. Trzebiatowski. **37**(2), 297–8 (Aug. 1973); CPM-7404E0551

Trzebiatowski, W.—Investigation of magnetic properties of monocrystals of the uranium compounds U_3P_4 and U_3As_4 in strong fields —K. P. Belov, Z. Genke, A. S. Dmitrievskiĭ, R. Z. Levitin, and W. Trzebiatowski. **37**(4), 686–8 (Oct. 1973); CPM-7407X1428

Trzhaskovskaya, M. B.—Investigation of the electronic mechanism of the isomorphic phase transition in cerium —V. A. Shaburov, I. M. Band, A. I. Grushko, T. B. Mezentseva, E. V. Petrovich, Yu. P. Smirnov, A. E. Sovestnov, O. I. Sumbaev, M. B. Trzhaskovskaya, and I. A. Markova. **38**(3), 573–81 (Mar. 1974); CPM-7411X0953

Tsakadze, Dzh. S.—Critical velocities for vortex formation by an oscillating disc in helium II and relaxation processes during it rotation —Z. Sh. Nadirashvili and Dzh. S. Tsakadze. **37**(5), 844–7 (Nov. 1973); CPM-7410X0184

—Vortex energy in helium II —Dzh. S. Tsakadze. **38**(2), 304–6 (Feb. 1974); CPM-7405F0522

Tsakadze, J. S.—Measurement of the relaxation time on acceleration of vessels with helium II and superfluidity in pulsars —J. S. Tsakadze and S. J. Tsakadze. **37**(5), 918–21 (Nov. 1973); CPM-7410X0258

Tsakadze, S. J.—Measurement of the relaxation time on acceleration of vessels with helium II and superfluidity in pulsars —J. S. Tsakadze and S. J. Tsakadze. **37**(5), 918–21 (Nov. 1973); CPM-7410X0258

Tsapenko, V. P.—Investigation of the reflection of laser radiation from a dense plasma —A. A. Rupasov, G. V. Sklizkov, V. P. Tsapenko, and A. S. Shikanov. **38**(5), 947–50 (May 1974)

Tsintsadze, N. L.—Transport phenomena in a completely ionized ultrarelativistic plasma —D. I. Dzhavakhishvili and N. L. Tsintsadze. **37**(4), 666–71 (Oct. 1973); CPM-7407X1408

Tsipenyuk, Yu. M.—From the history of the Journal of the Russian Physicochemical Society/JETP (In observance of the centennial of the Russian Physical Journal) —Yu. M. Tsipenyuk. **37**(1), 1–24 (Jul. 1973); CPM-7401D0703

Tsoĭ, V. S.—Radio-frequency size effect in tin cylinders —V. S. Tsoĭ. **37**(6), 1078–82 (Dec. 1973); CPM-7412X0126

Tsukernik, V. M.—Scaling relation for phase transitions in a one-dimensional x–y model —V. I. Ponomarev, V. M. Kontorovich, and V. M. Tsukernik. **38**(3), 600–3 (Mar. 1974); CPM-7411X0980

Tsvetkov, V. P.—Study of gravitational waves emitted by a rapidly rotating drop of a homogeneous gravitating liquid —M. N. Fedosov and V. P. Tsvetkov. **38**(4), 641–2 (Apr. 1974); CPM-7502X0001

Tsymbalenko, V. L.—Electric conductivity and superconducting properties of thin mercury films —V. L. Tsymbalenko and A. I. Shal'nikov. **38**(5), 1043–7 (May 1974)

Tsytovich, V. N.—Universality of the power spectra of relativistic electrons produced in a turbulent plasma —Yu. A. Nikolaev, V. N. Tsytovich, and A. S. Chikhachev. **37**(3), 445–8 (Sep. 1973); CPM-7406X1453

—Stochastic heating of plasma during the development of Langmuir turbulence instability —F. Kh. Khakimov and V. N. Tsytovich. **37**(4), 641–5 (Oct. 1973); CPM-7407X1383

—On the theory of transition radiation in a nonstationary medium —V. L. Ginzburg and V. N. Tsytovich. **38**(1), 65–70 (Jan. 1974); CPM-7405F0065

—Transition scattering —V. L. Ginzburg and V. N. Tsytovich. **38**(5), 909–11 (May 1974)

Tulinov, A. F.—A possibility of employing the shadow effect for studying the decay of quasistationary states —N. V. Eremin, Yu. V. Melikov, and A. F. Tulinov. **38**(3), 433–4 (Mar. 1974); CPM-7411X0813

Tumanov, O. A.—Excitation of vibrational levels in the $N^{14}H_3$ molecule by radiation from a CO_2 laser —R. V. Ambartsumyan, V. S. Letokhov, G. N. Markarov, A. G. Platova, A. A. Puretskiĭ, and O. A. Tumanov. **37**(3), 392–8 (Sep. 1973); CPM-7406X1400

Tunkin, V. G.—Spatial field and intensity correlation functions of laser radiation —A. G. Arutyunyan, S. A. Akhmanov, Yu. D. Golyaev, V. G. Tunkin, and A. S. Chirkin. **37**(5), 764–71 (Nov. 1973); CPM-7410X0104

Turov, E. A.—Nuclear spin motion with allowance for Suhl–Nakamura interaction —E. A. Turov, M. I. Kurkin, and V. V. Nikolaev. **37**(1), 147–53 (Jul. 1973); CPM-7401D0849

Tursunov, M. A.—Cross sections for multiphoton ionization of alkali metal atoms —G. A. Delone, N. B. Delone, V. K. Zolotarev, N. L. Manakov, G. K. Piskova, and M. A. Tursunov. **38**(2), 236–8 (Feb. 1974); CPM-7405F0454

Tutakina, O. P.—Magnetic birefringence and the domain structure of antiferromagnetic cobalt carbonate —N. F. Kharchenko, V. V. Eremenko, and O. P. Tutakina. **37**(4), 672–7 (Oct. 1973); CPM-7407X1414

U

Uĭmin, G. V.—Magnetic properties of plane and layer systems —V. L. Pokrovskiĭ and G. V. Uĭmin. **38**(4), 847–53 (Apr. 1974); CPM-7502X0207

Urushadze, G. I.—On tunneling of electron pairs in a sound field in superconductors —G. I. Urushadze. **37**(5), 950–2 (Nov. 1973); CPM-7410X0290

Usarov, U. T.—Anisotropy of Galvanomagnetic effects in single-crystal cobalt —E. N. Kondorskiĭ, O. S. Galkina, V. I. Ivanovskiĭ, A. V. Cheremushkina, and U. T. Usarov. **38**(5), 977–8 (May 1974)

Uspenskiĭ, Yu. A.—On the effect of a dielectric coating on the critical temperature of superconducting films —Yu. A. Uspenskiĭ and G. F. Zharkov. **38**(4), 727–9 (Apr. 1974); CPM-7502X0087

—On the efficiency of the exciton mechanism of superconductivity in films —Yu. A. Uspenskiĭ and G. F. Zharkov. **38**(6), 1254–6 (Jun. 1974)

V

Vaĭnshteĭn, S. I.—Strong plasma turbulences at helicon frequencies —S. I. Vainshtein. **37**(1), 73–6 (Jul. 1973); CPM-7401D0775

—"Antidynamo"—A possible mechanism of phenomena occurring in neutral layers of a magnetic field —S. I. Vaĭnshteĭn. **38**(2), 270–5 (Feb. 1974); CPM-7405F0488

Vaks, V. G.—On the theory of ferroelectrics of the KH_2PO_4 type — V. G. Vaks and V. I. Zinenko. **37**(2), 330–7 (Aug. 1973); CPM-7404E0584

—Theory of "diffuse" phase transitions —B. Ya. Balagurov and V. G. Vaks. **38**(4), 799–808 (Apr. 1974); CPM-7502X0159

—Random walks of a particle on lattices with traps —B. Ya. Balagurov and V. G. Vaks. **38**(5), 968–71 (May 1974)

Valeev, I. I.—Nuclear relaxation in SrF_2 —F. L. Aukhadeev, I. I. Valeev, and V. A. Skrebnev. **37**(5), 857–8 (Nov. 1973); CPM-7410X0197

—Proton relaxation in dilute rare-earth ethyl sulfates —I. I. Valeev, V. A. Skrebnev, and F. L. Aukhadeev. **38**(3), 593–6 (Mar. 1974); CPM-7411X0973

Valyanskaya, T. V.—Specific heat of the antiferromagnetic garnet $Ca_3Mn_2Ge_3O_{12}$ —K. P. Belov, T. V. Valyanskaya, L. G. Mamsurova, and V. I. Sokolov. **38**(3), 561–4 (Mar. 1974); CPM-7411X0941

Vardanyan, R. A.—Effect of laser radiation on superconductivity — R. A. Vardanyan and B. I. Ivlev. **38**(6), 1156–61 (Jun. 1974)

Vasil'ev, G. K.—Vibrational relaxation of HF and DF in a shock wave —G. K. Vasil'ev, E. F. Makarov, V. G. Papin, and V. L. Tal'rose. **37**(6), 1031–3 (Dec. 1973); CPM-7412X0079

Vasil'kovskiĭ, V. A.—NMR investigation of $Gd_xY_{1-x}Fe_2$ compounds —V. A. Vasil'kovskiĭ, N. M. Kovtun, A. K. Kuprianov, S. A. Nikitin, and V. F. Ostrovskiĭ. **38**(2), 342–4 (Feb. 1974); CPM-7405F0560

Vas'kov, V. V.—Self-action of radio waves in the vicinity of plasma resonance —V. V. Vas'kov and A. V. Gurevich. **37**(4), 646–50 (Oct. 1973); CPM-7407X1388

Veksler, V. I.—Group and successive pair collisions in scattering of Cs^+ ions by tungsten single crystals —V. I. Veksler and V. V. Evstifeev. **37**(2), 290–3 (Aug. 1973); CPM-7404E0544

Velikhov, E. P.—Non-self-sustained stationary gas discharge induced by electron-beam ionization in N_2–CO_2 mixtures at attmospheric pressure —E. P. Velikhov, S. A. Golubev, Yu. K. Zemtsov, A. F. Pal', I. G. Persiantsev, V. D. Pis'mennyĭ, and A. T. Rakhimov. **38**(2), 267–9 (Feb. 1974); CPM-7405F0485

Venttsel', V. A.—Effect of pressure on the Fermi surface of zinc —V. A. Venttsel', C. A. Voronov, A. I. Likhter, and A. V. Rudnev. **38**(6), 1220–4 (Jun. 1974)

Verkin, B. I.—Tunnel spectra of organic solvents —N. I. Bogatina, I. K. Yanson, B. I. Verkin, and A. G. Batrak. **38**(6), 1162–5 (Jun. 1974)

Vil'gel'mova, L.—Observation of the negative induction effect by bound hydrogen capture of π^- mesons —L. Vil'gel'mova, P. Zimrot, V. I. Petrukhin, V. E. Risin, L. M. Smirnova, V. M. Suvorov, and I. A. Yutlandov. **38**(1), 12–3 (Jan. 1974); CPM-7405F0012

Vitlina, R. S.—Resonance charge exchange in high density gases — R. S. Vitlina and A. M. Dykhne. **37**(2), 260–2 (Aug. 1973); CPM-7404E0514

Vitlina, R. Z.—Resonant charge exchange between dipole molecules —R. Z. Vitlina. **37**(3), 404–5 (Sep. 1973); CPM-7406X1412

—On the theory of vibration–rotation excitation of molecules —R. Z. Vitlina and A. V. Chaplik. **38**(2), 224–7 (Feb. 1974); CPM-7405F0442

Vladimirov, V. V.—Effect of the multivalley structure of the conduction band on helical instability in the electron–hole plasma of silicon —V. M. Bondar, V. V. Vladimirov, N. I. Kononenko, O. G. Sarbeĭ, and A. I. Shchedrin. **38**(3), 542–4 (Mar. 1974); CPM-7411X0922

Vladimirtsev, Yu. V.—Study of phase transitions in KD_2PO_4 single crystals by the acoustic magnetic resonance technique —Kh. G. Bogdanova, Yu. V. Vladimirtsev, V. A. Golenishchev-Kutuzov, and U. Kh. Kopvillem. **38**(3), 505–8 (Mar. 1974); CPM-7411X0885

Vlasenko, L. S.—Optical orientation of metastable He^3 atoms and its influence on the electron density and radiation emitted by helium atoms in a plasma —R. A. Zhitnikov, E. V. Blinov, and L. S. Vlasenko. **37**(1), 53–7 (Jul. 1973); CPM-7401D0755

Vlasenko, N. A.—Theory of spontaneous and stimulated electroluminescence of ZnS: Mn films —N. A. Vlasenko, S. I. Pekar, and V. S. Pekar. **37**(1), 190–4 (Jul. 1973); CPM-7401D0892

Vlasko-Vlasov, V. K.—Polarization–optical investigation of magnetization processes near dislocations in yttrium iron garnet single crystals —V. K. Vlasko-Vlasov, L. M. Dedukh, and V. I. Nikitenko. **38**(1), 184–94 (Jan. 1974); CPM-7405F0184

Vlasov, D. V.—Mechanism of contraction of the light pulse duration in stimulated Mandel'shtam–Brillouin scattering and the generation of nanosecond pulses —D. V. Vlasov. **37**(6), 1001–3 (Dec. 1973); CPM-7412X0049

Voĭtkovskiĭ, Yu. B.—Study of the Debye–Waller factor near the temperature of a phase transition of the first kind in cobalt —B. S. Bokshteĭn, Yu. B. Voĭtkovskiĭ, G. S. Nikol'skiĭ, and I. M. Razumovskiĭ. **37**(2), 283–4 (Aug. 1973); CPM-7404E0537

Volchok, I. V.—Thermal conductivity and the temperature dependences of the energy gaps of niobium samples containing large amounts of impurity atoms —E. E. Anders, B. Ya. Sukharevskiĭ, and I. V. Volchok. **37**(5), 852–6 (Nov. 1973); CPM-7410X0192

Volkov, A. F.—Collisionless relaxation of the energy gap in superconductors —A. F. Volkov and Sh. M. Kogan. **38**(5), 1018–21 (May 1974)

Volkov, V. A.—Theory of phase transitions in semiconductors of the A_4B_6 group —V. A. Volkov and Yu. V. Kopaev. **37**(6), 1103–8 (Dec. 1973); CPM-7412X0151

Volkova, N. V.—Magnetic anisotropy and magnetostriction of neodymium–substituted yttrium iron garnets —N. V. Volkova and V. I. Raĭtsis. **38**(2), 339–41 (Feb. 1974); CPM-7405F0557

Volodin, A. P.—Cyclotron resonance on nonextremal orbits —A. P. Volodin, M. S. Khaĭkin, and V. S. Édel'man. **38**(5), 1052–6 (May 1974)

Volovik, G. E.—Polarons in the strong coupling limit —V. I. Mel'nikov and G. E. Volovik. **38**(4), 819–23 (Apr. 1974); CPM-7502X0179

—Mobility of piezopolaron in the case of strong coupling —G. E. Volovik and V. M. Édel'shteĭn. **38**(5), 972–6 (May 1974)

Vol'skiĭ, E. P.—Temperature dependence of the damping of helicons in indium —E. P. Vol'skiĭ and V. T. Petrashov. **37**(1), 132–5 (Jul. 1973); CPM-7401D0834

—The de Haas–van Alphen effect and damping of helicons during plastic deformation in aluminum —E. P. Vol'skiĭ, L. G. Levchenkova, and V. T. Petrashov. **38**(1), 156–7 (Jan. 1974); CPM-7405F0156

Volyak, T. B.—Effect of magnetic field on soft x-ray radiation from laser plasma —T. B. Volyak, S. D. Kaĭtmazov, A. M. Prokhorov, and E. I. Shklovskiĭ. 37(2), 245–6 (Aug. 1973); CPM-7404E0499

Voron'ko, Yu. K.—Effect of donor–donor and donor–acceptor interactions on the decay kinetics of the metastable state of Nd^{3+} in crystals —Yu. K. Voron'ko, T. G. Mamedov, V. V. Osiko, M. I. Timoshechkin, and I. A. Shcherbakov. 38(3), 565–72 (Mar. 1974); CPM-7411X0945

Voronov, C. A.—Effect of pressure on the Fermi surface of zinc —V. A. Venttsel', C. A. Voronov, A. I. Likhter, and A. V. Rudnev. 38 (6), 1220–4 (Jun. 1974)

Voronov, N. A.—Gravitational Compton effect and photoproduction of gravitons by electrons —N. A. Voronov. 37(6), 953–8 (Dec. 1973); CPM-7412X0001

Vuĭovich, M.—Interaction of protons and hydrogen atoms with CO molecules —V. V. Afrosimov, G. A. Leĭko, Yu. A. Mamaev, M. N. Panov, and M. Vuĭovich. 38(2), 243–7 (Feb. 1974); CPM-7405F0461

Y

Yablokov, Yu. V.—Paramagnetic resonance of mixed chromium and iron triads —Yu. V. Yablokov, V. A. Gaponenko, M. V. Eremin, V. V. Zelentsov, and T. A. Zhemchuzhnikova. 38(5), 988–90 (May 1974)

Yachnev, I. L.—Accumulation of iodine molecules in flash photolysis of CF_3I and $n\text{-}C_3F_7I$ vapor —I. M. Belousova, N. G. Gorshkov, O. B. Danilov, V. Yu. Zalesskiĭ, and I. L. Yachnev. 38(2), 254–7 (Feb. 1974); CPM-7405F0472

Yakovenko, V. M.—Contribution to the theory of superheat instability in semiconductors —A. A. Bulgakov, É. A. Kaner, S. I. Khankina, and V. M. Yakovenko. 37(1), 171–5 (Jul. 1973); CPM-7401D0873

Yakovlenko, S. I.—Ionization of atoms in radiative collisions —S. I. Yakovlenko. 37(6), 1019–22 (Dec. 1973); CPM-7412X0067

Yakutenkov, A. A.—Experimental investigation of the generation kinetics of a ruby laser with a nonstationary resonator —Yu. E. Pol'skiĭ and A. A. Yakutenkov. 37(2), 223–6 (Aug. 1973); CPM-7404E0477

Yanson, I. K.—Mechanism of emission of coherent phonons from a point junction —I. K. Yanson. 37(2), 338–40 (Aug. 1973); CPM-7404E0592

—Tunnel spectra of organic solvents —N. I. Bogatina, I. K. Yanson, B. I. Verkin, and A. G. Batrak. 38(6), 1162–5 (Jun. 1974)

Yarovaya, R. G.—Temperature dependence of the optical properties and the energy spectrum of zinc —R. G. Yarovaya, I. N. Shklyarevskiĭ, and A. F. A. El-Shazly. 38(2), 331–4 (Feb. 1974); CPM-7405F0549

Yatsuk, L. A.—Connection between the superconducting properties and the structure of "amorphous" low-temperature bismuth films —B. I. Belevtsev, Yu. F. Komnik, and L. A. Yatsuk. 38(6), 1225–30 (Jun. 1974)

Yudin, I. I.—A method for measuring collision broadening of spectral lines —B. V. Rybakov, S. S. Skulachenko, A. M. Khromykh, and I. I. Yudin. 37(4), 582–3 (Oct. 1973); CPM-7407X1324

Yudin, V. A.—Surface resistance of cadmium in a magnetic field —V. V. Lavrova, S. V. Medvedev, V. G. Skobov, L. M. Fisher, and V. A. Yudin. 37(5), 929–36 (Nov. 1973); CPM-7410X0269

—Surface resistance of a cadmium plate in a magnetic field —V. V. Lavrova, S. V. Medvedev, V. G. Skobov, L. M. Fisher, and V. A. Yudin. 38(2), 349–53 (Feb. 1974); CPM-7405F0567

Yurishchev, M. A.—Wilson's method in the static model of the nucleon —A. A. Belavin and M. A. Yurishchev. 37(2), 208–10 (Aug. 1973); CPM-7404E0462

Yutlandov, I. A.—Observation of the negative induction effect by bound hydrogen capture of π^- mesons —L. Vil'gel'mova, P. Zimrot, V. I. Petrukhin, V. E. Risin, L. M. Smirnova, V. M. Suvorov, and I. A. Yutlandov. 38(1), 12–3 (Jan. 1974); CPM-7405F0012

—Search for structural effects in π^- meson capture by hydrogen in complex molecules —Z. V. Krumshteĭn, V. I. Petrukhin, V. E. Risin, L. M. Smirnova, V. M. Suvorov, and I. A. Yutlandov. 38(2), 222–3 (Feb. 1974); CPM-7405F0440

Z

Zagulin, V. A.—The mass-reflectron, a new nonmagnetic time-of-fight mass spectrometer with high resolution —B. A. Mamyrin, V. I. Karataev, D. V. Shmikk, and V. A. Zagulin. 37(1), 45–8 (Jul. 1973); CPM-7401D0747

Zakharov, V. E.—Kinetics of stimulated scattering of Langmuir waves by plasma ions —B. N. Breizman, V. E. Zakharov, and S. L. Musher. 37(4), 658–65 (Oct. 1973); CPM-7407X1400

—Interaction between solitons in a stable medium —V. E. Zakharov and A. B. Shabat. 37(5), 823–8 (Nov. 1973); CPM-7410X0163

—On stochastization of one-dimensional chains of nonlinear oscillators —V. E. Zakharov. 38(1), 108–10 (Jan. 1974); CPM-7405F0108

—Instability of waveguides and solitons in nonlinear media —V. E. Zakharov and A. M. Rubenchik. 38(3), 494–500 (Mar. 1974); CPM-7411X0874

Zakharov, Yu. V.—Electric conductivity of ferromagnets with a domain structure —Yu. V. Zakharov, Yu. I. Man'kov, and R. G. Khlebopros. 38(1), 119–22 (Jan. 1974); CPM-7405F0119

Zalesskiĭ, V. Yu.—Accumulation of iodine molecules in flash photolysis of CF_3I and $n\text{-}C_3F_7I$ vapor —I. M. Belousova, N. G. Gorshkov, O. B. Danilov, V. Yu. Zalesskiĭ, and I. L. Yachnev. 38 (2), 254–7 (Feb. 1974); CPM-7405F0472

Zapesochnyĭ, I. P.—Ultrasoft x-ray study of the s-ionization mechanism for noble gases —I. P. Zapesochnyĭ, I. G. Zhukov, and P. V. Fel'tsan. 38(4), 675–9 (Apr. 1974); CPM-7502X0035

—Resonance effects in inelastic collisions of slow electrons with cadmium and zinc atoms —O. B. Shpenik, I. P. Zapesochnyĭ, V. V. Sovter, E. É. Kontrosh, and A. N. Zavilopulo. 38(5), 898–902 (May 1974)

Zaretskiĭ, D. F.—Electron diffraction in a strong field by dielectric crystals —D. F. Zaretskiĭ and V. V. Lomonosov. 38(1), 140–2 (Jan. 1974); CPM-7405F0140

Zaslavskiĭ, G. M.—Statistical properties of the energy spectrum of "glancing" electrons with mixed classical trajectories —G. M. Zaslavskiĭ and N. N. Filonenko. 38(2), 317–23 (Feb. 1974); CPM-7405F0535

Zatovskiĭ, A. V.—Hydrodynamic asymptotic form of the rotational-motion correlation function of a molecule in a liquid —I. Z. Fisher, A. V. Zatovskiĭ, and N. P. Malomuzh. 38(1), 146–50 (Jan. 1974); CPM-7405F0146

Zavilopulo, A. N.—Resonance effects in inelastic collisions of slow electrons with cadmium and zinc atoms —O. B. Shpenik, I. P. Zapesochnyĭ, V. V. Sovter, E. É. Kontrosh, and A. N. Zavilopulo. 38(5), 898–902 (May 1974)

Zavorotnyĭ, V. U.—Quantum fluctuations in the photon flux in vacuum and in the diffraction pattern —V. U. Zavorotnyĭ and V. I. Tatarskiĭ. 37(2), 231–5 (Aug. 1973); CPM-7404E0485

Zel'dovich, Ya. B.—A hypothesis relating the entropy to the inhomogeneity of the universe —Ya. B. Zel'dovich. 37(1), 33–7 (Jul. 1973); CPM-7401D0735

—The structure of a shock wave in a radiation-dominated plasma —Ya. B. Zel'dovich and A. F. Illarionov. 38(4), 643–7 (Apr. 1974); CPM-7502X0003

—Electromagnetic and gravitational waves in a stationary magnetic field —Ya. B. Zel'dovich. 38(4), 652–4 (Apr. 1974); CPM-7502X0012

—Electromagnetic detectors of gravitational waves —V. B. Braginskiĭ, L. P. Grishchuk, A. G. Doroshkevich, Ya. B. Zel'dovich, I. D. Novikov, and M. V. Sazhin. 38(5), 865–9 (May 1974)

Zelentsov, V. V.—Paramagnetic resonance of mixed chromium and iron triads —Yu. V. Yablokov, V. A. Gaponenko, M. V. Eremin, V. V. Zelentsov, and T. A. Zhemchuzhnikova. 38(5), 988–90 (May 1974)

Zemtsov, Yu. K.—Non-self-sustained stationary gas discharge induced by electron-beam ionization in N_2–CO_2 mixtures at atmospheric pressure —E. P. Velikhov, S. A. Golubev, Yu. K. Zemtsov, A. F. Pal', I. G. Persiantsev, V. D. Pis'mennyĭ, and A. T. Rakhimov. 38(2), 267–9 (Feb. 1974); CPM-7405F0485

Zharkov, G. F.—On the effect of a dielectric coating on the critical temperature of superconducting films —Yu. A. Uspenskiĭ and G. F. Zharkov. 38(4), 727–9 (Apr. 1974); CPM-7502X0087

—On the efficiency of the exciton mechanism of superconductivity in films —Yu. A. Uspenskiĭ and G. F. Zharkov. 38(6), 1254–6 (Jun. 1974)

Zheludev, I. S.—Magnetic structure and localization of Co^{2+} and Fe^{2+} ions in hexagonal ferrites —V. F. Belov, T. A. Khimich, M. N. Shipko, I. S. Zheludev, E. V. Korneev, and N. S. Ovanesyan. **37**(6), 1089–95 (Dec. 1973); CPM-7412X0137

Zhemchuzhnikova, T. A.—Paramagnetic resonance of mixed chromium and iron triads —Yu. V. Yablokov, V. A. Gaponenko, M. V. Eremin, V. V. Zelentsov, and T. A. Zhemchuzhnikova. **38** (5), 988–90 (May 1974)

Zhikharev, V. A.—Conduction electron spin echo in metals —V. A. Zhikharev, A. R. Kessel', É. G. Kharakhash'yan, F. G. Cherkasov, and K. K. Shvarts. **37**(4), 689–94 (Oct. 1973); CPM-7407X1431

Zhitnik, A. K.—Allowance for correlation effects in narrow energy bands —N. A. Dmitriev, A. K. Zhitnik, and M. F. Sarry. **37**(4), 710–2 (Oct. 1973); CPM-7407X1452

Zhitnikov, R. A.—Optical orientation of metastable He^3 atoms and its influence on the electron density and radiation emitted by helium atoms in a plasma —R. A. Zhitnikov, E. V. Blinov, and L. S. Vlasenko. **37**(1), 53–7 (Jul. 1973); CPM-7401D0755

Zhukhovitskiĭ, A. A.—Mössbauer investigation of the relation between the electron structure and the diffusion properties of impurity atoms —B. S. Bokshteĭn and A. A. Zhukhovitskiĭ. **37**(1), 88–9 (Jul. 1973); CPM-7401D0790

Zhukov, I. G.—Ultrasoft x-ray study of the s-ionization mechanism for noble gases —I. P. Zapesochnyĭ, I. G. Zhukov, and P. V. Fel'tsan. **38**(4), 675–9 (Apr. 1974); CPM-7502X0035

Zhukovskiĭ, V. Ch.—Induced two-photon synchrotron radiation and Compton scattering in a magnetic field —V. Ch. Zhukovskiĭ and N. S. Nikitina. **37**(4), 595–8 (Oct. 1973); CPM-7407X1337.

Zhuzhunashvili, A. I.—Polarization spectroscopic analysis of noise produced in annihilation of oppositely moving magnetic fields — M. V. Babykin, A. I. Zhuzhunashvili, E. A. Oks, V. V. Shapkin, and G. V. Sholin. **38**(1), 86–92 (Jan. 1974); CPM-7405F0086

Zil'berman, P. E.—Transport theory of the interaction of ultrasound with conduction electrons —P. E. Zil'berman and A. G. Mishin. **38**(4), 733–7 (Apr. 1974); CPM-7502X0093

Zimrot, P.—Observation of the negative induction effect by bound hydrogen capture of π^- mesons —L. Vil'gel'mova, P. Zimrot, V. I. Petrukhin, V. E. Risin, L. M. Smirnova, V. M. Suvorov, and I. A. Yutlandov. **38**(1), 12–3 (Jan. 1974); CPM-7405F0012

Zinenko, V. I.—On the theory of ferroelectrics of the KH_2PO_4 type —V. G. Vaks and V. I. Zinenko. **37**(2), 330–7 (Aug. 1973); CPM-7404E0584

Zolotarev, V. K.—Cross sections for multiphoton ionization of alkali metal atoms —G. A. Delone, N. B. Delone, V. K. Zolotarev, N. L. Manakov, G. K. Piskova, and M. A. Tursunov. **38**(2), 236–8 (Feb. 1974); CPM-7405F0454

Zon, B. A.—Alteration of atomic multiplet in an intense varying field —B. A. Zon and B. G. Katsnel'son. **38**(3), 470–5 (Mar. 1974); CPM-7411X0850

Zosimov, V. V.—Investigation of equilibrium and stability of self-contracted discharges in an optically dense plasma —A. F. Aleksandrov, V. V. Zosimov, A. A. Rukhadze, V. I. Savoskin, and I. B. Timofeev. **37**(5), 794–800 (Nov. 1973); CPM-7410X0134

Zrailnov, V. P.—Asymptotic electron terms of colliding identical heavy nuclei —V. P. Zrailnov and S. I. Kakharov. **37**(6), 983–6 (Dec. 1973); CPM-7412X0031

Zrelov, V. P.—"Needle" Vavilov–Cerenkov radiation in a Rochelle salt crystal —V. P. Zrelov, P. Pavlovich, and P. Sulek. **37**(1), 127–31 (Jul. 1973); CPM-7401D0829

Zubkov, L. A.—Analysis of the anisotropic light scattering spectrum in liquids —L. A. Zubkov, N. B. Rozhdestvenskaya, and V. P. Romanov. **38**(5), 891–7 (May 1974)

Zuev, V. S.—Photochemical decomposition waves —B. L. Borovich, V. S. Zuev, and O. N. Krokhin. **37**(4), 602–4 (Oct. 1973); CPM-7407X1344

Zviadadze, M. D.—The role of the dipole–dipole reservoir in electron–nuclear double resonance at distant nuclei —L. L. Buishvili, M. D. Zviadadze, and N. P. Fokina. **38**(6), 1135–8 (Jun. 1974)

Zybalov, A. A.—Polarization of protons from the $\gamma+p\to\pi^0+p$ reaction produced by 692–1028 MeV photons at 90° in the center-of-mass system —N. V. Goncharov, A. I. Derebchinskiĭ, A. A. Zybalov, O. G. Konovalov, A. E. Tenishev, S. G. Tonapetyan, and V. M. Khvorostyan. **37**(2), 205–7 (Aug. 1973); CPM-7404E0459

Zygmunt, A.—Magnetic anisotropy of the uranium compounds UAsS and UAsSe —K. P. Belov, A. S. Dmitrievskii, A. Zygmunt, R. Z. Levitin, and V. Trzebiatowski. **37**(2), 297–8 (Aug. 1973); CPM-7404E0551

Zyryanov, P. S.—Phase modulation of Mössbauer spectra and the generation of ultrasound in metals by a radio-frequency field —I. A. Dubovtsev, P. S. Zyryanov, and N. P. Filippova. **38**(3), 509–14 (Mar. 1974); CPM-7411X0889

CURRENT PHYSICS INDEX

This new publication will help you do a better job of managing the physics information that is available to you. It will alert you to the important articles . . . and tell you what's in those important articles . . . and help you locate those important articles.

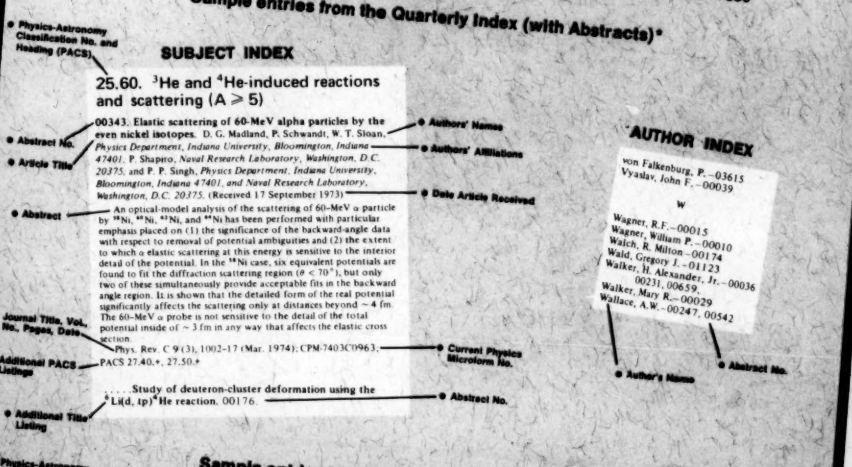
CURRENT PHYSICS INDEX is your personal guide through the primary research journals of the American Institute of Physics and its Member Societies. Don't miss this quarterly (with abstracts) and annual index to what's happening in your field.

And the price will make you happy. Unlike other physics abstracts and index services that now cost over $350, this new publication is moderately priced for both the individual and the library.

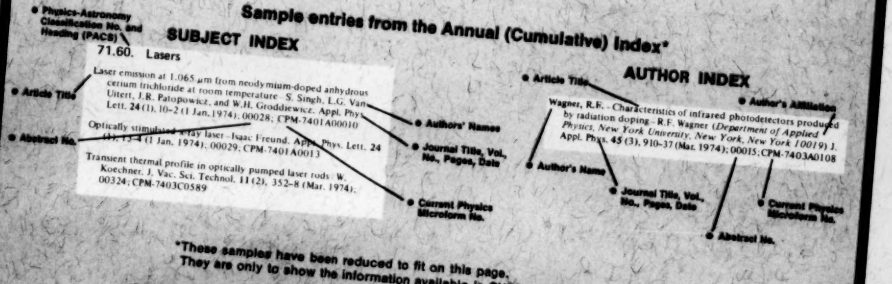
Each Quarterly Index contains about 560 pages, over 4,300 abstracts (as they appear in the primary journals) and a 30 page alphabetical author listing.

Each Annual Index is a cumulative author-and-subject index in a separate 1600 page volume.

Sample entries from the Quarterly Index (with Abstracts)*


Physics-Astronomy Classification No. and Heading (PACS)
SUBJECT INDEX
25.60. 3He and 4He-induced reactions and scattering (A ≥ 5)
00343. Elastic scattering of 60-MeV alpha particles by the even nickel isotopes. D. G. Madland, P. Schwandt, W. T. Sloan, Physics Department, Indiana University, Bloomington, Indiana 47401; P. Shapiro, Naval Research Laboratory, Washington, D.C. 20375; and P. P. Singh, Physics Department, Indiana University, Bloomington, Indiana 47401, and Naval Research Laboratory, Washington, D.C. 20375. (Received 17 September 1973)
Abstract No.
Article Title
Authors' Names
Authors' Affiliations
Date Article Received
Abstract
An optical-model analysis of the scattering of 60-MeV α particle by 58Ni, 60Ni, 62Ni, and 64Ni has been performed with particular emphasis placed on (1) the significance of the backward-angle data with respect to removal of potential ambiguities and (2) the extent to which α elastic scattering at this energy is sensitive to the interior detail of the potential. In the 64Ni case, six equivalent potentials are found to fit the diffraction scattering region (θ < 70°), but only two of these simultaneously provide acceptable fits in the backward angle region. It is shown that the detailed form of the real potential significantly affects the scattering only at distances beyond ~ 4 fm. The 60-MeV α probe is not sensitive to the detail of the total potential inside of ~ 3 fm in any way that affects the elastic cross section.
Journal Title, Vol., No., Pages, Date
Phys. Rev. C 9 (3), 1002–17 (Mar. 1974); CPM-7403C0963.
Current Physics Microform No.
Additional PACS Listings
PACS 27.40.+, 27.50.+
. . . . Study of deuteron-cluster deformation using the 3Li(d, tp)4He reaction. 00176.
Abstract No.
Additional Title Listing
AUTHOR INDEX
von Falkenburg, P.—03615
Vyaslav, John F.—00039
W
Wagner, R.F.—00015
Wagner, William P.—00010
Walch, R. Milton—00174
Wald, Gregory J.—01123
Walker, H. Alexander, Jr.—00036
00231, 00659.
Walker, Mary R.—00029
Wallace, A.W.—00247, 00542
Author's Names
Abstract No.

Sample entries from the Annual (Cumulative) Index*


Physics-Astronomy Classification No. and Heading (PACS)
SUBJECT INDEX
71.60. Lasers
Article Title
Laser emission at 1.065 μm from neodymium-doped anhydrous cerium trichloride at room temperature. S. Singh, L.G. Van Uitert, J.R. Patopowicz, and W.H. Grodkiewicz. Appl. Phys. Lett. 24 (1), 10–2 (1 Jan. 1974); 00028; CPM-7401A00010
Abstract No.
Optically stimulated X-ray laser. Isaac Freund. Appl. Phys. Lett. 24 (1), 13–4 (1 Jan. 1974); 00029; CPM-7401A0013
Transient thermal profile in optically pumped laser rods. W. Koechner. J. Vac. Sci. Technol. 11 (2), 352–8 (Mar. 1974); 00324; CPM-7403C0589
Authors' Names
Journal Title, Vol., No., Pages, Date
Current Physics Microform No.
AUTHOR INDEX
Article Title
Author's Affiliation
Wagner, R.F. Characteristics of infrared photodetectors produced by radiation doping. R.F. Wagner (Department of Applied Physics, New York University, New York, New York 10019) J. Appl. Phys. 45 (3), 910–37 (Mar. 1974); 00015; CPM-7403A0108
Author's Name
Journal Title, Vol., No., Pages, Date
Current Physics Microform No.
Abstract No.

*These samples have been reduced to fit on this page.
They are only to show the information available in CURRENT PHYSICS INDEX.

SUBSCRIPTION RATE:
1975 CURRENT PHYSICS INDEX
(includes Quarterly and Annual Indexes)

Regular Rate	Domestic**
AIP Member Society & Affiliated Society Member Rate	$95
Annual Cumulative Section Only (For Regular Rate Subscribers)	$350
	$80

**Domestic includes U.S., Possessions, Canada, Mexico

A copy of the complete article of any listed in Current Physics Index can be obtained from Current Physics Reprints, American Institute of Physics. Request prices.

Send orders to:
Marketing Services
American Institute of Physics
335 East 45 Street
New York, NY 10017

TRANSLATION JOURNALS

Published in English by the American Institute of Physics.

Soviet Physics—JETP

A translation, beginning with 1955 issues of *Zhurnal Eksperimental'noi i Teoreticheskoi Fiziki*. Leading physics journal of Soviet Union.

12 issues per year, approx. 4600 Russian pages
$180 domestic, $184 foreign (air freight: $189, Asia $200)

JETP LETTERS

A translation, beginning with 1965 issues of *ZhETF Pis'ma v Redaktsiyu*. Brief reports of new and significant work; rapid publication of original and of translation.

24 issues per year, approx. 1400 Russian pages
$75 domestic, $78 foreign (air freight: $83, Asia $89)

Soviet Physics—SOLID STATE

A translation, beginning with 1959 issues of *Fizika Tverdogo Tela*. Theoretical and experimental research in solid state physics and its applications.

12 issues per year, approx. 3700 Russian pages
$180 domestic, $184 foreign (air freight: $192, Asia $205)

Soviet Physics—TECHNICAL PHYSICS

A translation, beginning with 1956 issues of *Zhurnal Tekhnicheskoi Fiziki*. Plasma physics, magnetohydrodynamics, lasers, physical electronics, microwave physics, accelerators, ion and electron optics.

12 issues per year, approx. 2600 Russian pages
$150 domestic, $154 foreign (air freight: $157, Asia $167)

Soviet Physics—ACOUSTICS

A translation, beginning with 1955 issues of *Akusticheskii Zhurnal*. Devoted principally to physical acoustics but includes electro-, bio-, and psychoacoustics, architectural acoustics, noise and underwater sound.

6 issues per year, approx. 650 pages
$85 domestic, $88 foreign (air freight: $89, Asia $92)

Soviet Physics—DOKLADY

A translation, beginning with 1956 issues of the physics sections of *Doklady Akademii Nauk SSSR*, the Proceedings of the USSR Academy of Sciences. All-science journal offering four-page reports of recent research.

12 issues per year, approx. 1500 Russian pages
$90 domestic, $94 foreign (air freight: $96, Asia $103)

Soviet Journal of NUCLEAR PHYSICS

A translation, beginning with 1965 issues of *Yadernaya Fizika*. Experimental and theoretical research on the physics of the nucleus, application of nuclear methods, cosmic rays and elementary particle physics.

12 issues per year, approx. 2600 Russian pages
$160 domestic, $164 foreign (air freight: $167, Asia $173)

Soviet Journal of PARTICLES AND NUCLEI

A translation, beginning with 1972 (Volume 3) issues of *Fizika Elementarnykh Chastits i Atomnogo Yadra*. Theoretical and experimental research in high energy physics; elementary particles; nuclei; accelerators.

4 issues per year, approx. 800 Russian pages
$75 domestic, $78 foreign (air freight: $79, Asia $80)

Soviet Journal of QUANTUM ELECTRONICS

A translation, beginning with 1971 (Volume 1) issues of *Kvantovaya Elektronika*. Experimental and theoretical work on quantum electronics and its applications in science and technology.

12 issues per year, approx. 3000 Russian pages
$180 domestic, $183 foreign (air freight: $184, Asia $187)

Soviet Physics—CRYSTALLOGRAPHY

A translation, beginning with 1956 issues of *Kristallografiya*. Experimental and theoretical papers on crystal structure, x-ray, electron and neutron diffraction, lattice dynamics, symmetry and other topics.

6 issues per year, approx. 1300 Russian pages
$90 domestic, $93 foreign (air freight: $94, Asia $98)

Soviet ASTRONOMY

A translation, beginning with 1957 issues of the principal Soviet journal of astronomy, *Astronomicheskii Zhurnal*. Astronomy, astrophysics, astrometry; solar activity, stellar spectroscopy, radio astronomy and cosmology.

6 issues per year, approx. 1400 pages
$105 domestic, $108 foreign (air freight: $109, Asia $112)

Soviet Physics—USPEKHI

A translation, beginning with September, 1958 issue of *Uspekhi Fizicheskikh Nauk*. Review papers comparable to those in the *Reviews of Modern Physics*. Also reports on scientific meetings in the Soviet Union, and personalia.

6 issues per year, approx. 1400 Russian pages
$75 domestic, $78 foreign (air freight: $79, Asia $82)

Soviet Physics—SEMICONDUCTORS

A translation, beginning with the 1967 issues of *Fizika i Tekhnika Poluprovodnikov*. Experimental and theoretical work on semiconductors including transfer, surface and resonance phenomena, optics, nonequilibrium processes, plasma problems, radiation effects, p-n junctions, etc.

12 issues per year, approx. 3000 Russian pages
$180 domestic, $184 foreign (air freight: $187, Asia $196)

Soviet Journal of OPTICAL TECHNOLOGY

An Optical Society of America translation journal, beginning with 1966 issues of *Optiko-Mekhanicheskaya Promyshlennost*. Experimental and theoretical papers and review articles on optical science and technology; instrumentation, measurement and control.

6 issues per year, approx. 800 Russian pages
O.S.A. members $15 domestic, $15 foreign (air freight: $21, Asia $25)
Non-members $80 domestic, $83 foreign (air freight: $86, Asia $90)

OPTICS AND SPECTROSCOPY

An Optical Society of America translation journal, beginning with 1959 issues of *Optika i Spektroskopiya*.

12 issues per year, approx. 2000 Russian pages
O.S.A. members $20 domestic, $20 foreign (air freight: $26, Asia $31)
Non-members, $85 domestic, $88 foreign (air freight: $92, Asia $98)

CHINESE PHYSICS

A translation, resuming in 1974, of *Wuli Xuebao (Acta Physica Sinica)*, the physics journal of the Chinese Academy of Sciences in Peking.

6 issues per year, approx. 600 Chinese pages
$90 domestic, $93 foreign (air freight: $94, Asia $98

Subscriptions are also handled by the American Institute of Physics for HIGH TEMPERATURE, a translation beginning with 1963 issues of Teplofizika Vysokikh Temperatur. 6 issues per year, approx. 1000 Russian pages. $150 domestic, $170 foreign (air freight: $170, Asia $170)